



2007 Rhode Island
HIV/AIDS
Epidemiologic Profile
With
Surrogate Data



A publication of



Rhode Island Department of Health
Division of Community Family Health and Equity
Office of HIV/AIDS & Viral Hepatitis
August 2008

Table of Contents

| | |
|---|-----------|
| Preface | 3 |
| Acknowledgements..... | 4 |
| Introduction | |
| • Introduction..... | 5 |
| • Organization of the Epidemiologic Profile..... | 6 |
| • HIV/AIDS Surveillance in Rhode Island..... | 6 |
| • Data Sources..... | 7 |
| • Data Limitations..... | 8 |
| Core Epidemiologic Questions | |
| Core epidemiological questions..... | 10 |
| 1) What are the socio-demographic characteristics of the population of Rhode Island? | 11 |
| 2) What is the impact of the HIV/AIDS epidemic on Rhode Island?..... | 14 |
| • AIDS in Rhode Island..... | 14 |
| • Pediatric AIDS..... | 24 |
| • HIV in Rhode Island..... | 25 |
| 3) Who is experiencing differential impact from the HIV/AIDS epidemic?..... | 32 |
| • MSM ‘Men Who Have Sex With Men’ | 32 |
| • IDU ‘Intravenous Drug Users’ | 35 |
| • Minority Women..... | 39 |
| • Inmates of the Rhode Island ACI ‘Adult Correctional Institute’ | 41 |
| • Persons unaware of their HIV status..... | 42 |
| • Youth and HIV..... | 44 |
| Appendices | |
| Surrogate Data in Rhode Island..... | 46 |
| • STDs in Rhode Island..... | 46 |
| • CTS: HIV Counseling Testing and Referral Sites in Rhode Island..... | 54 |
| • Encore: Rhode Island’s Needle Exchange Program..... | 56 |
| • Tuberculosis in Rhode Island..... | 59 |
| • Viral Hepatitis C in Rhode Island..... | 60 |
| • Behavior Risk Factor Surveillance System (BRFSS)..... | 63 |
| • Youth Risk Behavior Survey (YRBS)..... | 64 |
| List of Figures and Tables..... | 65 |

Preface

Each year the Office of HIV/AIDS & Viral Hepatitis at the Rhode Island Department of Health prepares and presents an epidemiologic report based upon the HIV, AIDS and Viral Hepatitis case reports that come to the department. This edition adds the 2007 calendar year of reports received and analyzed.

Many complexities and challenges exist to fully realize a quality database for this report. Recently, our Rhode Island Surveillance Team was visited by the Centers for Disease Control and Prevention (CDC) senior epidemiology staff and they were “very impressed with the elements of our database, its high quality and the accuracy of reporting.” It is important to note that this profile is compliant with the CDC surveillance and epidemiologic reporting guidelines. Upon its release, it is immediately distributed to community partners through the department of health website and is disseminated to both the Rhode Island Community Planning Group for HIV Prevention (RICPG) as well as the HIV Provision of Care Committee. As alluded to above, the data found within is primarily gathered by the Rhode Island Department of Health as part of our public health assurance function and is also a mandate of our HIV Surveillance Grant with the CDC. As part of these responsibilities, the reportable diseases of HIV, AIDS and Viral Hepatitis are diligently recorded, analyzed and monitored by our group of professionals so that we can continue to monitor trends and distribution of diseases

It is important that we acknowledge the key contributors to this document. Let me begin by thanking Dr. Sutopa Chowdhury, the Epidemiologist for the Office of HIV/AIDS & Viral Hepatitis. As the primary author of this profile she has worked hand in hand with many staff as well as with community partners to produce this report. Of course Drs. Utpala Bandy, Peter Simon and Samara Viner-Brown assisted in the review and editing of this document and we are grateful for their contributions and continued guidance. Lucille Minuto also an editor, helped immensely with formatting and design. Our Disease Intervention Specialists, Zoanne Parillo and Kathy Barton deserve special thanks. Their hard work and dedication in maintaining the quality data is evident within this report. In addition, I want to thank Angle Reyes for his long time technical assistance and support as the Management Information Systems expert. We appreciate his knowledge and guidance. Our appreciation also goes to Dr. Gifford, the Director of Health and Ana Novais, Associate Director of Health, Division of Community Family Health and Equity, for their leadership. Finally, I wish to acknowledge the Rhode Island Community Planning Group and their efforts in making Epidemiology become alive. They have been the recipient of countless training on epidemiology and have seen draft versions of this report for their planning purposes. We thank them for their dedication, review and helpful comments.

Many of you have advised us that this report is a valuable resource for planning, grant writing and projecting needs of high-risk populations. Please continue to share your comments and suggestions so we may continue to strive towards the highest of standards. Additional copies of this report are available through web at www.health.ri.gov.

Paul G. Loberti, MPH
Chief Administrator
RI Department of Health
Office of HIV & AIDS & Viral Hepatitis
Rhode Island Department of Health

Rhode Island Department of Health

Administrative and Staff Acknowledgements

Director

David Gifford, MD, MPH

Associate Director

Division of Community Family Health and Equity

Ana Novais, MA

Assistant Medical Director & State Epidemiologist

Utpala Bandy, MD, MPH

Assistant Medical Director

Peter Simon, MD, MPH

Chief

Center for Health Data and Analysis

Samara Viner-Brown, MS

Office of HIV/AIDS and Viral Hepatitis

Chief Administrator

Paul Loberti, MPH

Assistant Administrator

Lucille Minuto, RN, MEd

Public Health Epidemiologist

Sutopa Chowdhury, MBBS, MPH

Sr. Disease Control Representative (Surveillance)

Zoanne Parillo

Sr. Disease Control Representative (Surveillance)

Kathleen King-Barton

Management Information Systems

Angel Reyes

INTRODUCTION

INTRODUCTION

The Epidemiologic Profile provides detailed information about the current HIV/AIDS and Hepatitis C (HCV) epidemics in Rhode Island. The profile aims to describe the general population of Rhode Island, HIV infected persons, persons with AIDS, and those that are at risk of HIV infection. A similar analysis is done for HCV.

As mentioned within the preface this report serves many different functions and is part of the commitment of the Rhode Island Department of Health to disseminate health related information to our partners.

Organization of the Epidemiologic Profile

This report is organized around three core epidemiological questions. Each question will be represented in a separate chapter, which will include relevant data and interpretations. The core epidemiologic questions are:

- 1) What are the socio-demographic characteristics of the population of Rhode Island?
This section provides information on the general demographic and socioeconomic characteristics of Rhode Island.
- 2) What is the impact of the HIV/AIDS epidemic on Rhode Island?
This section examines the scope of the HIV/AIDS epidemic in Rhode Island. It is divided into two parts; the first part addresses AIDS cases and the second part addresses HIV infected (not AIDS) individuals
- 3) Who is experiencing differential impact from the HIV/AIDS epidemic in Rhode Island?
This section addresses certain populations that have been disproportionately affected by the epidemic. This section relies mostly on HIV surveillance data (not AIDS) as it aims to address current trends in HIV transmission.

HIV/AIDS Surveillance in Rhode Island

Surveillance mandate

In accordance with Rhode Island's General Laws, Chapter 23 and the "Rules and Regulations for the Reporting of Communicable Diseases" of the Rhode Island Department of Health, both HIV and AIDS are reportable to the Office of HIV/AIDS & Viral Hepatitis by hospitals, laboratories and licensed health care professionals. And as of July 2006, HIV is reportable by name to the Health Department by the above entities.

Case definitions:

In its collection, assessment, and aggregation of HIV and AIDS reports, the Rhode Island Department of Health conforms to surveillance case definitions of HIV and AIDS promulgated by the Centers for Disease Control and Prevention (CDC) and revised over time. Case definitions have been nationally published in 1986, 1987, 1992, 1993 and 1999.

- CDC. Classification system for human T-lymphotropic virus type III/lymphadenopathy-associated virus infections. MMWR 1986; 35:334.
- CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987; 36:1-15S.
- CDC. 1993 Revised Classification System for HIV Infection and Expanded Surveillance Case Definition for AIDS Among Adolescents and Adults. MMWR 1992; 41(RR-17).
- CDC. Appendix: Revised Surveillance Case Definition for HIV Infection. MMWR 1999; 48(RR13); 29-31.

It is important to note that revisions in the CDC surveillance definitions of HIV and AIDS may cause discontinuities in trend data. Between 1992 and 1993, for example, the number of AIDS cases in Rhode Island and in the United States as a whole increased dramatically because of CDC's expanded surveillance case definition for AIDS. The reader should keep these fluctuations in mind as they review and digest the information herein.

Data Sources

Case surveillance of AIDS was initiated in Rhode Island in 1983, and HIV surveillance began in 1989. These surveillance systems provide information on risk factors, patient demographics, and the clinical manifestations of disease over time. The present Epidemiologic Profile relies primarily on these case surveillance data. However, the Office of HIV/ AIDS & Viral Hepatitis utilizes an array of data sources to establish the most complete and accurate picture of HIV and AIDS in Rhode Island and the populations at highest risk for infection. The list below identifies many of the sources of information used by the Office of HIV/AIDS & Viral Hepatitis.

HARS: (HIV/AIDS Reporting System) Includes all reported cases of AIDS since 1983 and all HIV cases reported after July 2006.

HIVREP: (HIV Reporting System) Preceded the HARS system. Contains reports of illness by lab test code and therefore is not representative of a unique count of cases.

HIV Unique-Identifier Reporting System: Implemented in 2000, providers were required to report all cases of HIV infection with a unique patient identifier and without names until June 2006. This provides an unduplicated count of cases from 2000-June 2006. HIV cases are reported with name since July 2006 and are stored in HARS database described above.

eHARS: (enhanced HIV/AIDS Reporting System) Implemented in 2008 as an upgrade of HARS, which includes all AIDS cases reported since 1983 and HIV cases reported with name since 2006. This system has the capacity to store multiple case reports for cases.

HIVSER: (HIV Serology Database) - Includes all positive and negative HIV test results submitted to the Rhode Island Department of Health State Laboratories.

CTR: (Counseling, Testing and Referral Database) - Provides information on all HIV tests and services provided at CTR sites funded by the Rhode Island Department of Health.

BRFSS: (Behavioral Risk Factor Surveillance System)

YRBSS: (Youth Risk Behavior Survey)

STD Database: Information from the Rhode Island Department of Health's Office of Communicable Diseases that is used for identifying at-risk populations and co-infection.

Tuberculosis Database: Information from the TB Surveillance System is matched with HARS to identify missing cases of AIDS in the form of unreported co-infections (HIV-TB) as cases of AIDS.

Cancer Registry: Information used for identifying individuals with AIDS-defining malignancies.

Social Security Death Index / Rhode Island State Medical Examiner: Two sources used to identify deaths attributed to AIDS and also to follow-up on previously reported cases.

Hospital Medical Records: Patient medical records are utilized in AIDS validation studies and in the follow-up of previously reported cases.

ACI Medical Records: All convicted inmates are tested for HIV at intake in the ACI (Adult Correctional Institute). The system in place has provisions to eliminate duplicate HIV positive test results.

Data Limitations

The ideal HIV/AIDS surveillance system would be capable of detecting and accurately detailing all new HIV infections so that HIV prevention programs could most accurately reflect the current factors causing people to be at risk. Since 1983, the Department of Health has required the reporting of all AIDS cases by name and since 1989 has required all HIV positive test results to be reported. The HIV positive test results had been previously collected without names or other identifying information in order to protect the anonymity of patients. However, this "no names/no identifiers" system fostered duplication and incomplete information. As a result, a new HIV reporting system was implemented in 2000 which used a unique identifier code to maintain patient anonymity, but essentially eliminated case duplication and allowed for more effective follow-up. This new HIV reporting system greatly improved our ability to conduct HIV surveillance. Most recently, in 2006, HIV was federally required to be reported by name. As a result the accuracy and quality of our data base has been enhanced and reflected within the period representing 2006-2007.

An important notation regarding HIV incidence is relevant here, despite the recent changes in the reporting of HIV, it is important to note that a newly reported case of HIV (or in the past an HIV positive test) does not necessarily signify a recent infection with HIV. Many individuals are

unaware or are unwilling to be tested for HIV and therefore may be tested and diagnosed long after the initial infection occurred. Moreover, an individual infected with HIV may not progress to AIDS for many years, thereby making AIDS data potentially unreliable for the purpose of detailing current transmission patterns. For more information pertaining to the recently released HIV incidence data report from CDC go to <http://www.cdcnpin.org/scripts/hiv/whatsnew.asp>

Third parties, most frequently health care providers, report much of the data needed by the Office of HI/ AIDS & Viral Hepatitis. As a result, these reports rely on the patients and providers to accurately and completely disclose relevant information pertaining to risk factors, demographic characteristics and clinical history.

Core Epidemiologic Questions*

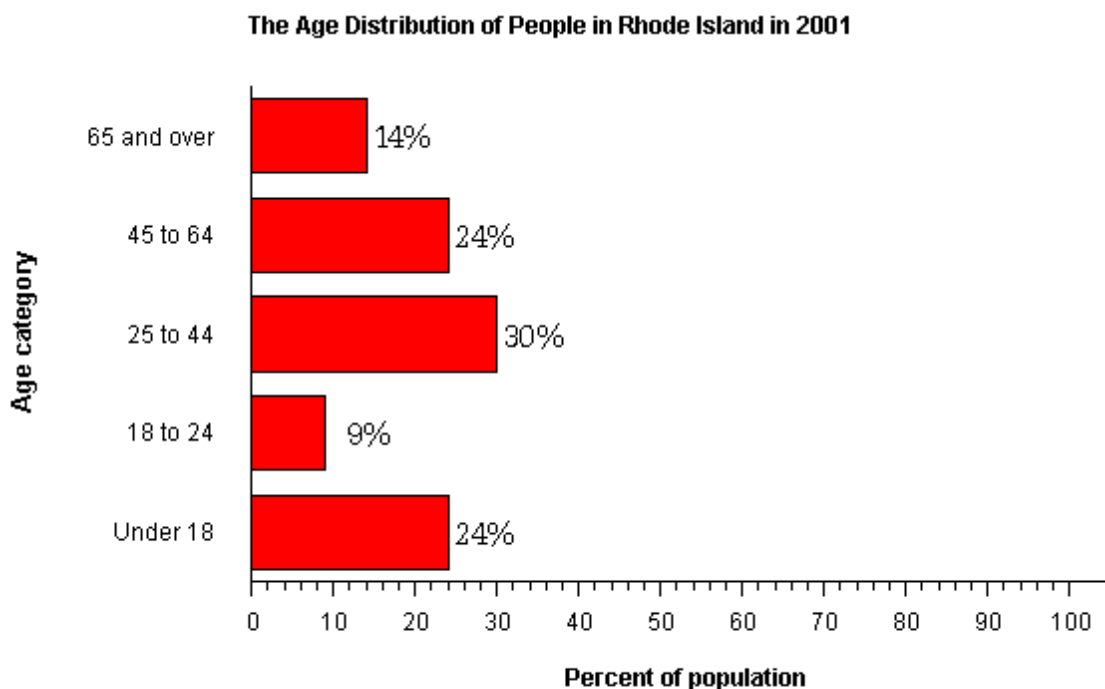
- 1) *What are the socio-demographic characteristics of the population of Rhode Island?*
- 2) *What is the impact of the HIV/AIDS epidemic on Rhode Island?*
- 3) *Who is experiencing differential impact from the HIV/AIDS epidemic?*

** These questions are based on Integrated Guidelines for Developing Epidemiologic Profiles by the CDC, HRSA.*

1) What are the socio-demographic characteristics of the population of Rhode Island?

Rhode Island is a small but densely populated state; it has the distinction of being the second most densely populated state in the United States. In 2001, Rhode Island had a household population of 1.0 million. Of these **529,000 (52 percent) females** and **491,000 (48 percent) were males**. The **median age was 37.5 years old**. **Twenty-four percent of the population were under 18 years of age** and **14 percent were 65 years and older**.

Figure 1. Age Distribution of People in Rhode Island in 2001.



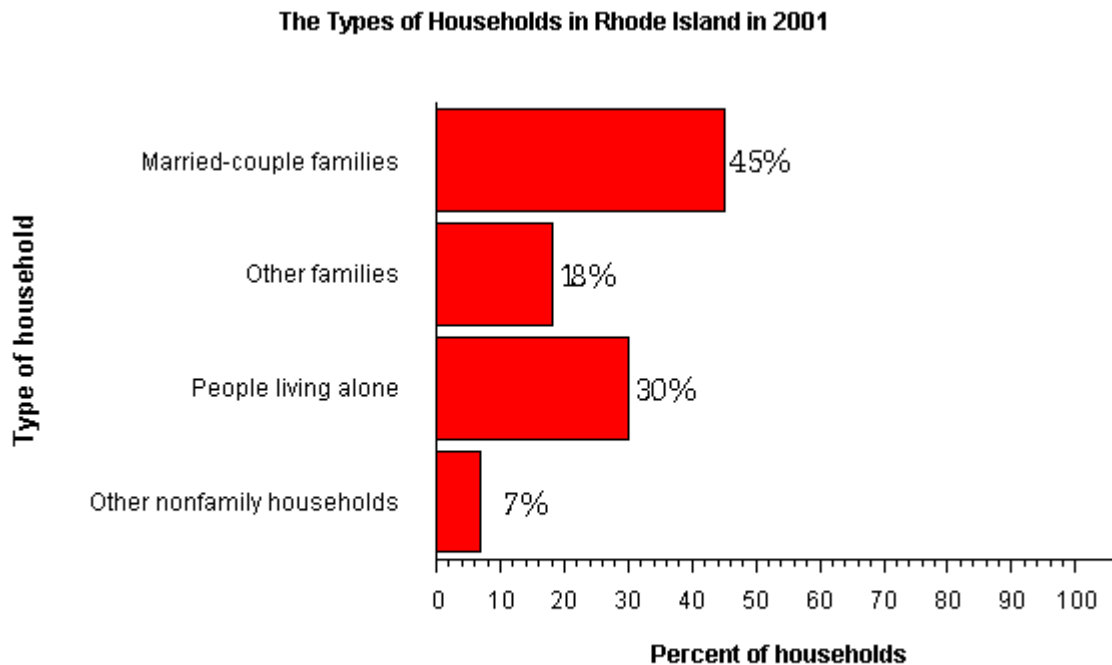
Source: U.S. Census Bureau, 2001 Supplementary Survey

For people reporting one race alone, **87 percent were White**; **5 percent were Black or African American**; **less than 0.5 percent were American Indian and Alaska Native**; **3 percent were Asian**; **less than 0.5 percent were Native Hawaiian and Other Pacific Islander**, and **5 percent were some other race**. Two percent reported two or more races. **Nine percent of the people in Rhode Island were Hispanic**. **Eighty-two percent of the people in Rhode Island were White non-Hispanic**. People of Hispanic origin may be of any race.

HOUSEHOLDS AND FAMILIES: In 2001 there were 406,000 households in Rhode Island. The average household size was 2.51 people.

Families made up 63 percent of the households in Rhode Island. This figure includes both married-couple families (45 percent) and other families (18 percent). Non-family households made up 37 percent of all households in Rhode Island. Most of the non-family households were people living alone, but some were comprised of people living in households in which no one was related to the householder.

Figure 2. Types of Households in Rhode Island 2001



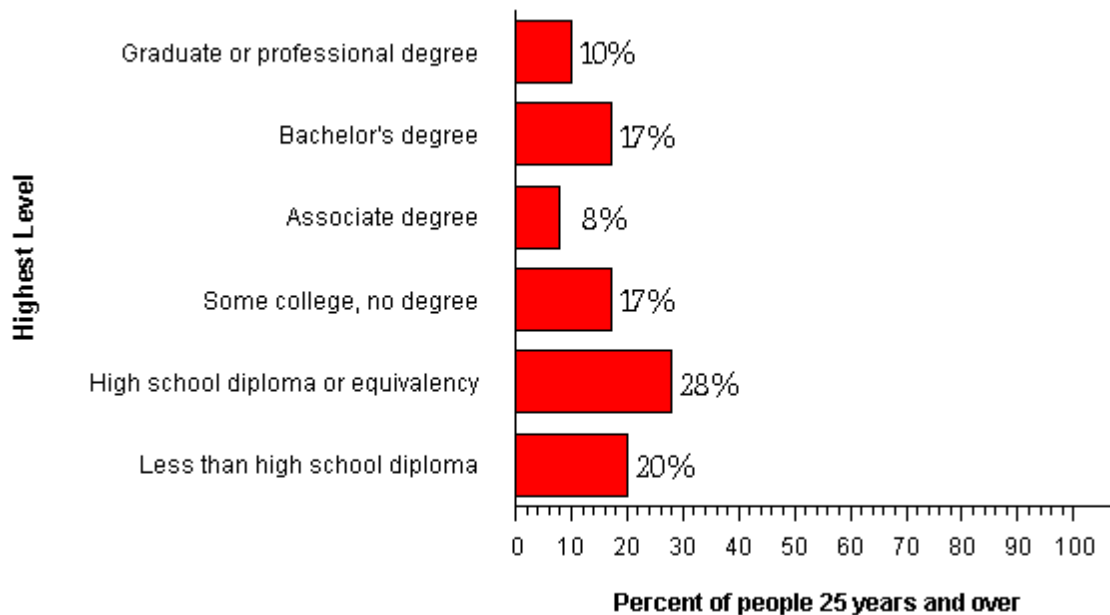
Source: U.S. Census Bureau, 2001 Supplementary Survey

EDUCATION: In 2001, 80 percent of people 25 years of age and over had at least graduated from high school and 27 percent had a bachelor's degree or higher. Among people 16 to 19 years old, 9 percent were dropouts; they were not enrolled in school and had not graduated from high school.

The total school enrollment in Rhode Island was 264,000 in 2001. Preprimary school enrollment was 28,000 and elementary or high school enrollment was 172,000 children. College enrollment was 64,000.

Figure 3. The Educational Attainment of People in Rhode Island in 2001

The Educational Attainment of People in Rhode Island in 2001



Source: U.S. Census Bureau, 2001 Supplementary Survey

DISABILITY: In Rhode Island, among people at least five years old in 2001, 16 percent reported a disability. The likelihood of having a disability varied by age - from 7 percent of people 5 to 20 years old, to 14 percent of people 21 to 64 years old, and to 42 percent of those 65 and older.

INCOME: The median income of households in Rhode Island was \$42,784. Seventy-six percent of the households received earnings and 17 percent received retirement income other than Social Security. Twenty-eight percent of the households received Social Security. The average income from Social Security was \$12,019. These income sources are not mutually exclusive; that is, some households received income from more than one source.

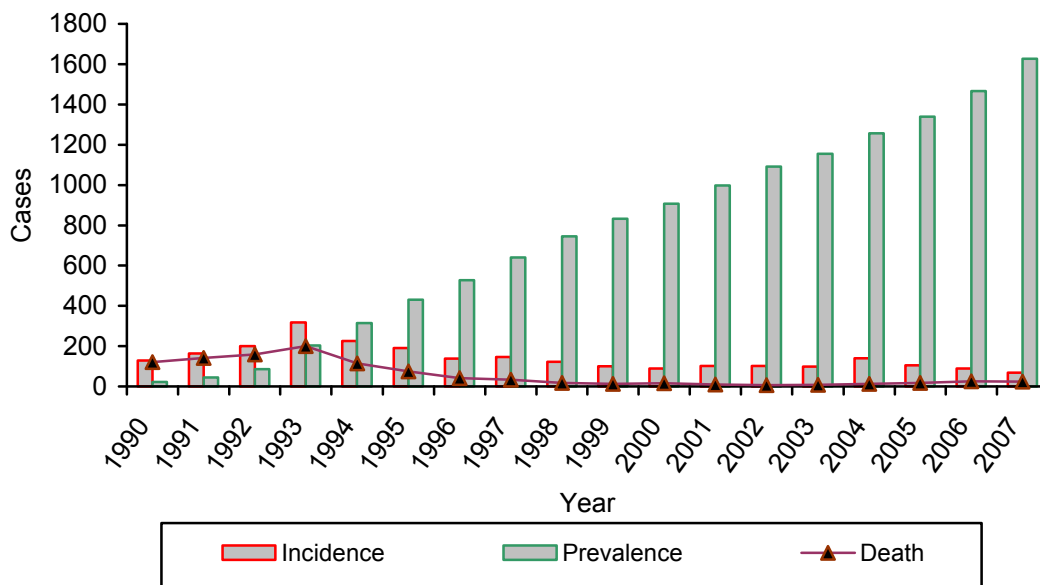
POVERTY AND PARTICIPATION IN GOVERNMENT PROGRAMS: In 2001, 12 percent of people were in poverty. Seventeen percent of related children under 18 were below the poverty level, compared with 11 percent of people 65 years old and over. Nine percent of all families and 25 percent of families with a female householder and no husband present had incomes below the poverty level. Twenty percent of the households in Rhode Island received means-tested public assistance or non-cash benefits.

2) What is the impact of the HIV/AIDS epidemic on Rhode Island?

AIDS in Rhode Island

As of **December 31, 2007**, a **total of 2,926 cases of AIDS** have been diagnosed in Rhode Island residents. Since 1993, the incidence, which is the number of new cases of AIDS, and deaths among AIDS cases have decreased dramatically, coinciding with the widespread use of more effective treatments. As seen in Figure 1, **AIDS incidence has decreased by 78%** (from 317 new cases in 1993 to 69 new cases in 2007). During the same time period the AIDS prevalence, or the total number of **AIDS cases living in Rhode Island each year, has increased 8 fold** (from 203 cases in 1993 to 1,627 cases in 2007).

Figure 4. Rhode Island AIDS Incidence, Prevalence, and Deaths, 1990-2007



Of the 2,926 cases diagnosed, the majority were males (75%), between 30-39 (43%) years of age and White (55%). Collectively MSM and intravenous drug use (IDU) were the two most common modes of exposures. Table 1 shows a detailed demographic profile of all AIDS cases diagnosed since 1982 to 2007.

Table 1. Demographic Characteristics of RI AIDS Cases: Cumulative (1982-2007)

| Demographic Characteristics | RI Cases 1982-2007 |
|--------------------------------------|--------------------|
| Gender | |
| Male | 2,206(75%) |
| Female | 720 (25%) |
| Total | 2,926 (100%) |
| Age Group | |
| <5 | 22 (1%) |
| 5-12 | 6 (<1%) |
| 13-19 | 38 (1%) |
| 20-29 | 326 (11%) |
| 30-39 | 1,252 (43%) |
| 40-49 | 998 (34%) |
| 50+ | 284 (10%) |
| Total | 2,926 (100%) |
| Race/Ethnicity | |
| Hispanic-All Races | 534 (18%) |
| American Indian/Alaska Native | 23 (1%) |
| Asian | 8(<1) |
| Legacy Asian/Pacific Islander | 13 (<1%) |
| African American | 746 (25%) |
| Native Hawaiian/ Pacific Islander | <5 * |
| White | 1,599 (55%) |
| Total | 2,926 (100%) |
| Exposure Category | |
| MSM | 1011(35%) |
| IDU | 990 (34%) |
| MSM/IDU | 148 (5%) |
| Hemophilia/Coagulation Disorder | 38 (1%) |
| Heterosexual Contact | 625 (21%) |
| Transfusion/Transplant | 31 (1%) |
| **Mother with HIV | 32 (1%) |
| No Risk Reported | 51 (2%) |
| Total | 2,926 (100%) |
| *Cell contained less than five cases | |
| **Pediatric Transmission Modes | |

Epidemiological Trends of AIDS in Rhode Island

The demographic profile of those diagnosed with AIDS has changed over time. Tables 2 and 3 show the demographic characteristics of AIDS cases by year of diagnosis.

Table 2. Demographic Characteristics of RI AIDS Cases by Year of Diagnosis 1998-2002

| Demographic Characteristics | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------------------------------|------------|-----------|-----------|-----------|-----------|
| Gender | | | | | |
| Male | 89 (74%) | 71 (74%) | 67 (76%) | 64 (65%) | 75 (75%) |
| Female | 32 (26%) | 25 (26%) | 21 (24%) | 35 (35%) | 24 (25%) |
| Total | 121 (100%) | 96 (100%) | 88 (100%) | 99(100%) | 99 (100%) |
| Age Group | | | | | |
| <13 | <5 * | <5 * | <5 * | <5 * | <5 * |
| 13-19 | <5 * | <5 * | <5 * | <5 * | <5 * |
| 20-29 | 11 (9%) | 5 (5%) | 13 (15%) | 14 (14%) | 8 (8%) |
| 30-39 | 54 (45%) | 31 (32%) | 34 (39%) | 37 (37%) | 37 (37%) |
| 40-49 | 43 (36%) | 41 (43%) | 32 (36%) | 31 (31%) | 41 (41%) |
| 50+ | 10 (8%) | 18 (19%) | 8 (9%) | 15 (15%) | 12 (12%) |
| Total | 121 (100%) | 96 (100%) | 88 (100%) | 99 (100%) | 99 (100%) |
| Race/Ethnicity | | | | | |
| Hispanic-All Races | 34 (28%) | 24 (25%) | 16 (18%) | 27 (27%) | 18 (18%) |
| American Indian/Alaska Native | <5 * | <5 * | <5 * | <5 * | <5 * |
| Asian | <5 * | <5 * | <5 * | <5 * | <5 * |
| African American | 33 (27%) | 16 (17%) | 26 (30%) | 30 (30%) | 32 (33%) |
| Native Hawaiian/ Pacific Islander | <5 * | <5 * | <5 * | <5 * | <5 * |
| White | 52 (43%) | 55 (57%) | 41 (47%) | 40 (40%) | 47 (48%) |
| Total | 121 (100%) | 96 100%) | 88 (100%) | 99 (100%) | 99 (100%) |
| Exposure Category | | | | | |
| MSM | 34 (28%) | 25 (26%) | 23 (26%) | 17 (17%) | 28 (28%) |
| IDU | 42 (35%) | 34 (35%) | 32 (36%) | 37 (37%) | 32 (32%) |
| MSM/IDU | 5 (4%) | <5 * | <5 * | <5 * | <5 * |
| Hemophilia/Coagulation Disorder | <5 * | <5 * | <5 * | <5 * | <5 * |
| Heterosexual Contact | 35 (29%) | 29 (30%) | 27 (31%) | 40 (40%) | 34 (37%) |
| Transfusion/Transplant | <5 * | <5 * | <5 * | <5 * | <5 * |
| Mother with HIV | <5 * | <5 * | <5 * | <5 * | <5 * |
| No Risk Reported | <5 * | <5 * | <5 * | <5 * | <5 * |
| Total | 121 (100%) | 96 (100%) | 88 (100%) | 99 (100%) | 99 (100%) |

* Cell contained less than five cases

Table 3. Demographic Characteristics of RI AIDS Cases by Year of Diagnosis 2003-2007

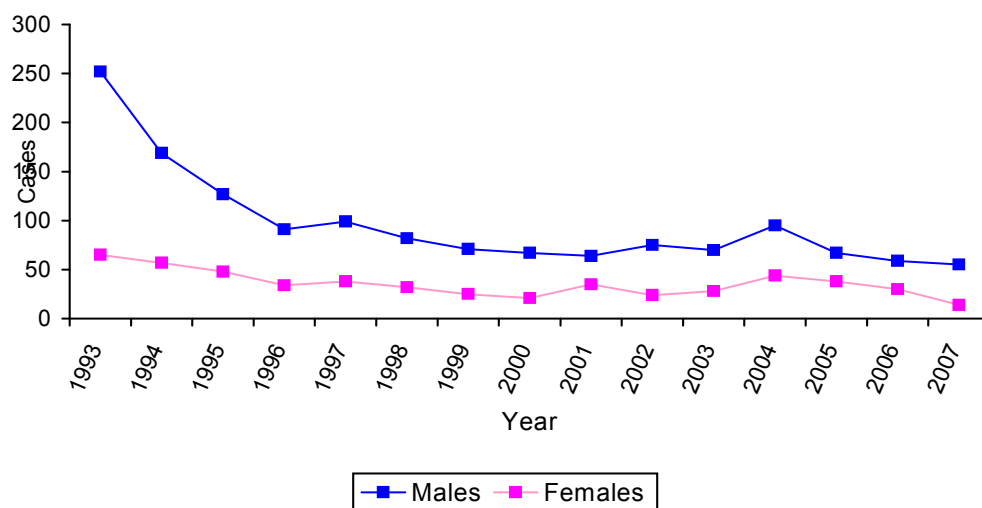
| Demographic | 2003 | 2004 | 2005 | 2006 | 2007 |
|---------------------------------------|-----------|------------|------------|-----------|-----------|
| Gender | | | | | |
| Male | 70 (71%) | 95 (68%) | 67 (64%) | 59 (66%) | 55(80%) |
| Female | 28 (29%) | 44 (32%) | 38 (36%) | 30 (34%) | 14(20%) |
| Total | 98 (100%) | 139(100%) | 105 (100%) | 89 (100%) | 69 (100%) |
| Age Group | | | | | |
| <13 | <5 * | <5 * | <5 * | <5* | <5* |
| 13-19 | <5 * | <5 * | <5 * | <5* | <5* |
| 20-29 | 11 (11%) | 16 (11%) | 8 (8%) | 5 (6%) | 7(10%) |
| 30-39 | 34 (35%) | 58 (42%) | 29 (28%) | 29 (33%) | 24 (35%) |
| 40-49 | 37 (38%) | 47 (34%) | 51 (49%) | 35 (39%) | 28 (41%) |
| 50+ | 12 (12%) | 18 (13%) | 16 (17%) | 18 (20%) | 10 (14%) |
| Total | 98 (100%) | 139 (100%) | 105(100%) | 89 (100%) | 69 (100%) |
| Race/Ethnicity | | | | | |
| Hispanic-All Races | 24 (24%) | 42 (30%) | 21 (20%) | 20 (22%) | 13 (19%) |
| American Indian/Alaska Native | <5 * | <5 * | <5 * | <5 * | <5 * |
| Asian | <5 * | <5 * | <5 * | <5 * | <5 * |
| African American | 37 (38%) | 39 (28%) | 32 (30%) | 27 (30%) | 16 (23%) |
| Native Hawaiian/ Pacific Islander | <5 * | <5 * | <5 * | <5* | <5* |
| White | 36 (37%) | 55 (40%) | 49 (47%) | 38 (43%) | 38 (55%) |
| Total | 98 (100%) | 139 (100%) | 105 (100%) | 89 (100%) | 69 (100%) |
| Exposure Category | | | | | |
| MSM | 27 (28%) | 38 (27%) | 30 (29%) | 29 (33%) | 28 (40%) |
| IDU | 26 (27%) | 31 (22%) | 26 (25%) | 17 (19%) | 13 (19%) |
| MSM/IDU | <5 * | 7 (5%) | 5 (5%) | <5* | <5* |
| Hemophilia/Coagulation Disorder | <5 * | <5 * | <5 * | <5* | <5* |
| Heterosexual Contact | 41 (42%) | 56 (40%) | 35 (33%) | 33 (33%) | 6 (9%) |
| Transfusion/Transplant | <5 * | <5 * | <5 * | <5 * | <5 * |
| Mother with HIV | <5 * | <5 * | <5 * | <5 * | <5 * |
| No Risk Reported | <5 * | <5 * | <5 * | <5 * | 19 (28%) |
| Total | 98 (100%) | 139 (100%) | 105 (100%) | 89 (100%) | 69 (100%) |
| * Cell contained less than five cases | | | | | |

Gender

More male cases continue to be diagnosed in Rhode Island than female; however, the gap between genders in the number of AIDS cases has shown a steady decrease since 1993. In 1993, there were 187 more cases in males than females in Rhode Island. The gap between reported male and female cases increased by 14% in the number of reported female cases for the year 2007 as compared to 2006. While the increase in the proportion of women being diagnosed with AIDS is a national trend, this trend is a bit more evident in Rhode Island as compared nationally.

Explanations as to why this trend related to increasing AIDS diagnosis among women is occurring are not entirely evident. One reason may be that more symptomatic woman are being tested by providers and are found to have AIDS at the time of their HIV testing. With that said, it has been postulated that within this population of woman who find out they have AIDS when tested, their care providers may be more aggressive with testing woman regardless of their symptoms, or perceptions that they may be in a monogamous relationship.

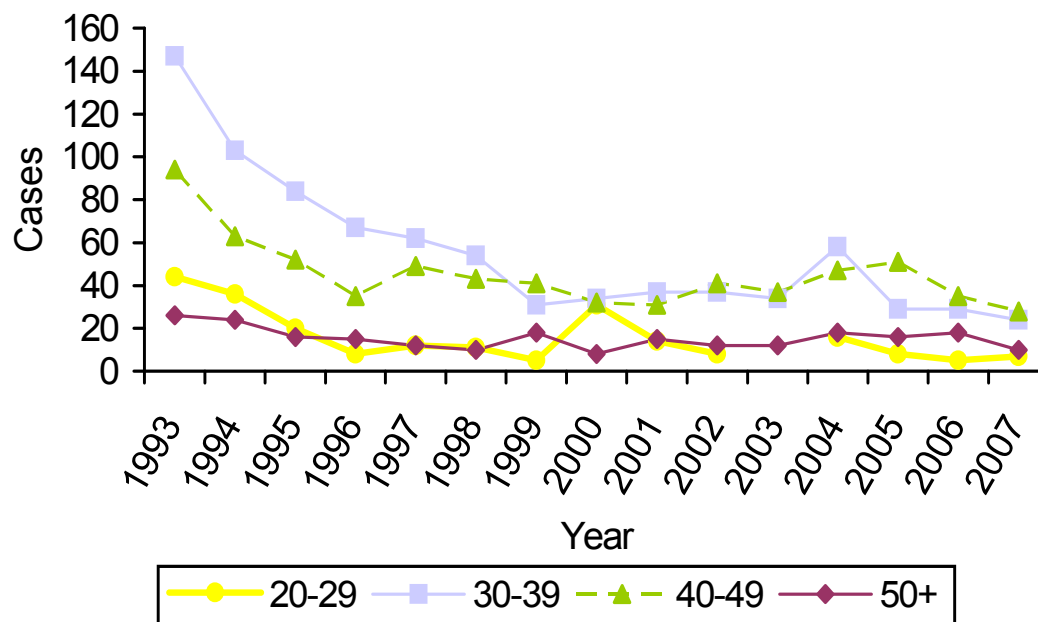
Figure 5. Rhode Island AIDS Incidence by Gender, 1993-2007



Age

The age distribution of new AIDS case has maintained a fairly stable trend over the years. As seen in figure 6, the rate of AIDS incidence has been significantly higher in the age groups 30 to 39 and 40 to 49 years, however from 2005 to 2007 among the newly reported AIDS cases, 40 to 49 age-groups was predominant.

Figure 6. Rhode Island AIDS Incidence by Age, 1993-2007



Race/Ethnicity and Origin

Figure 7 shows that the majority of AIDS cases in Rhode Island have occurred in Whites (55%). However, 43% of the AIDS cases have occurred in African Americans and Hispanics who account for 14% of Rhode Island's population, as shown in figure 8. **African Americans experience the highest rate of disease, they account for 25% of all AIDS cases and only 5% of the total population of Rhode Island. Hispanics experience the second highest rate of disease, they account for 18% of all AIDS cases while they represent only 9% of the total population of Rhode Island.** Among all reported AIDS cases since 1982, 79% of cases were born in U.S.A, 8% in U.S. Dependent countries, 4% in Sub-Saharan African countries, 6% in Caribbean Basin countries and about 3% in other countries which is displayed in figure no. 8.

Figure 7 a. Percentages of Cumulative AIDS Cases by Race in Rhode Island through Dec. 2007

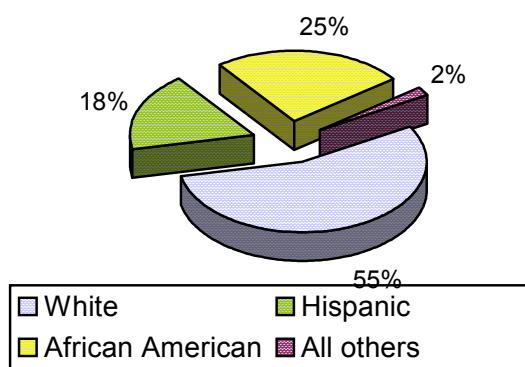


Figure 7 b. Percentages of Rhode Island Population by Race, 2000 Census

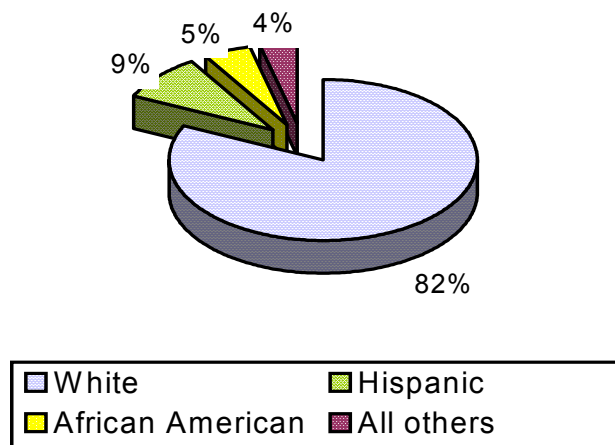
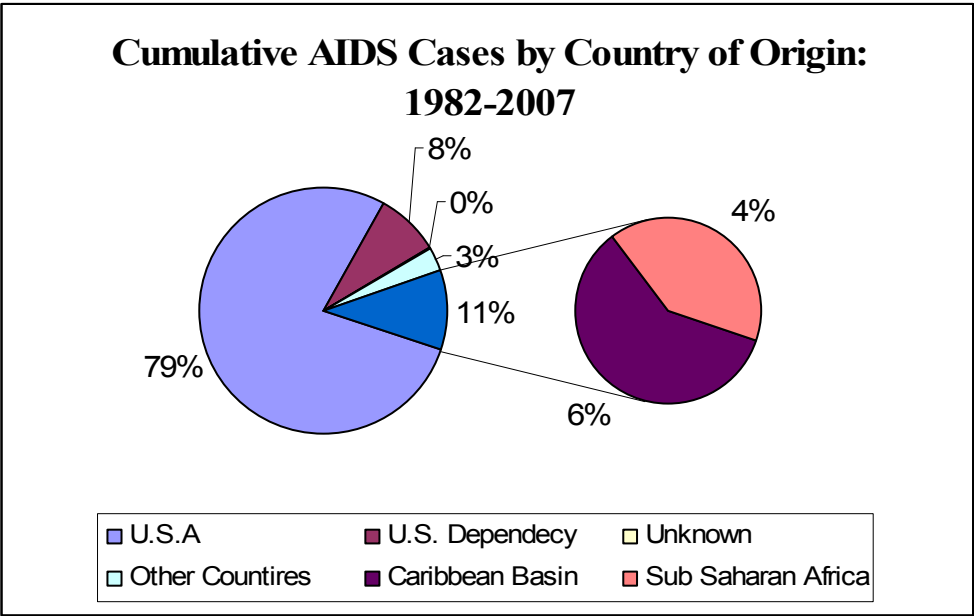


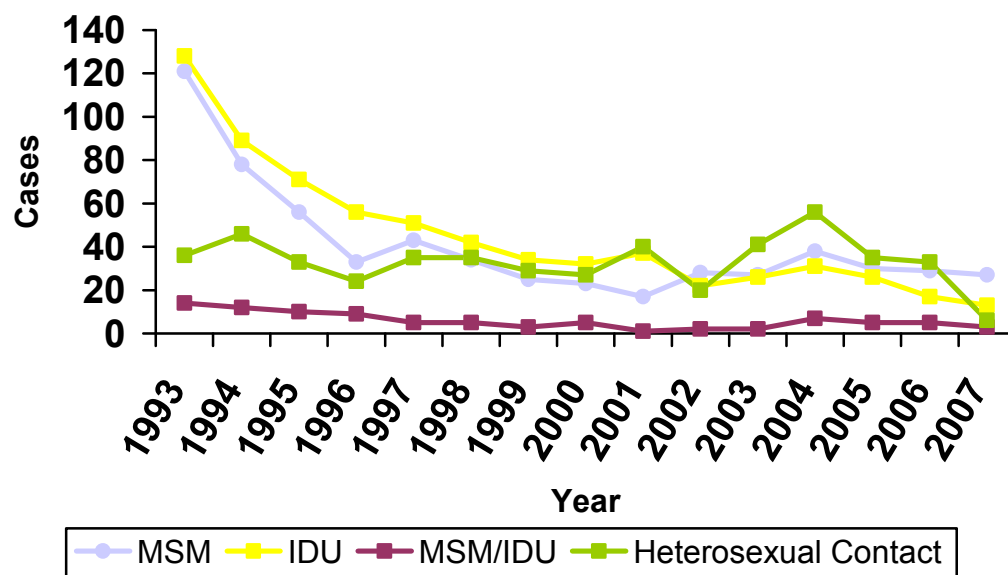
Figure 8. Percentages of Rhode Island Cumulative AIDS cases by Country of Origin, 1982-2007



Exposure Category

While men who have sex with men (MSM) and injecting drug users (IDU) have been the dominant exposure categories since the beginning of the epidemic, this pattern is changing. Since 1993, IDU and MSM-associated AIDS incidence have shown a downward trend, with IDU-associated AIDS incidence dropping by 86% and MSM-associated AIDS incidence dropping by 76%. Number of AIDS cases associated with heterosexual contact on the other hand did not vary much over the years, however since 2004 number of AIDS cases associated with heterosexual contact steadily decreased.

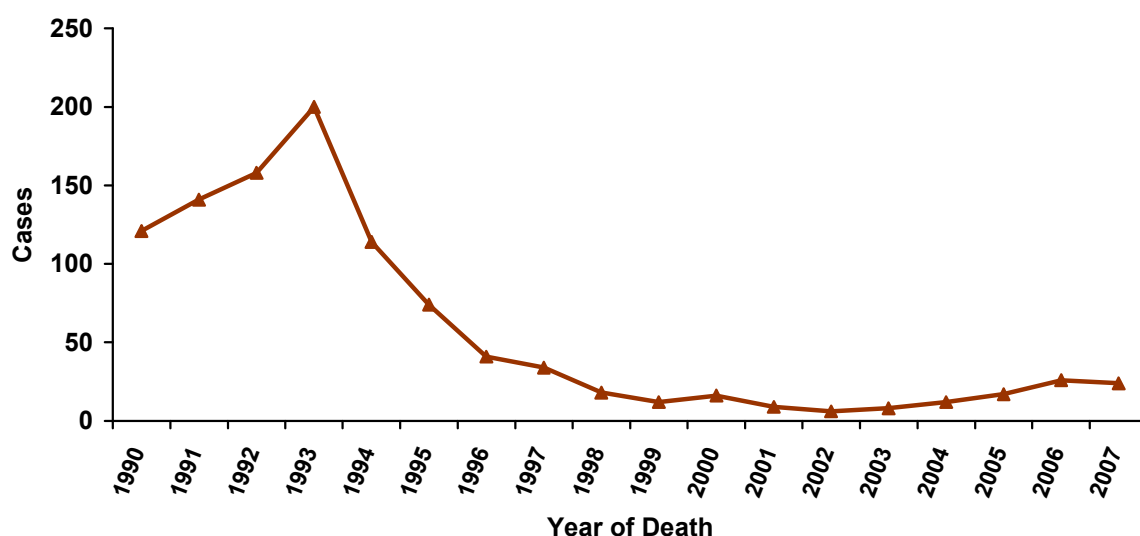
Figure 9. Rhode Island AIDS Incidence by Exposure Category, 1993-2007



Death among AIDS Cases

In Rhode Island from the beginning of the epidemic through 2007, **1427 deaths occurred among persons with AIDS**. Consistently, since 1994, the number of AIDS deaths have steadily declined with the exception of a small increase in 2000, 2005 and 2006 (Figure 10); however, due to advances in clinical therapy and antiretroviral, the population living with HIV/AIDS is much larger now than what it was at the beginning of the epidemic. The demographic profile of deaths among AIDS cases is similar to that of AIDS incidence, in regards to gender, race/ethnicity, and exposure category distribution.

Figure 10. AIDS Deaths, RI Residents, 1990-2007



Pediatric AIDS Cases

From 1982 to 2007, 29 children between the ages of zero and 12 were diagnosed with AIDS in Rhode Island. Most cases were male (69 %) and African American (52 %). Transmission from a mother with HIV (86 %) was the most common risk factor, and pediatric transfusion accounted for 10 % of the documented cases.

Table 4. Percentage of children ages 0-12 reported with AIDS, RI residents, 1982-2006, by demographic characteristic

| Demographic Characteristic (N=29) | % |
|---------------------------------------|-----|
| Sex | |
| Male | 69 |
| Female | 31 |
| Total | 100 |
| Race/Ethnicity | |
| White | 24 |
| Black | 52 |
| Hispanic | 21 |
| Asian | * |
| Native American | * |
| Total | 100 |
| Risk Factor | |
| Mother w/ HIV | 86 |
| Pediatric Transfusion | 10 |
| Pediatric Other | 3 |
| Total | 100 |
| * Cell contained less than five cases | |

HIV in Rhode Island

Overview

Between January 1, 2000 and December 31, 2007, there were 1102 Rhode Island residents newly diagnosed with HIV and reported to the Rhode Island Department of Health. This number provides a minimum estimate of HIV infection, as it does not include those HIV infected individuals who have not been tested yet and those who get tested anonymously.

According to the Centers for Disease Control and Prevention (CDC) at the end of 2006, 448,871 people were living with AIDS and 1039,000-1185,000 people were living with HIV and AIDS in the United States. Based on this estimate **the estimated number of people living with HIV and AIDS in Rhode Island in 2007 is between 3766-4295.**

The reporting of positive HIV test results has been mandatory in Rhode Island since 1989. From 1989 through 1999, reports purposely did not contain sufficient identifying information to establish the uniqueness of an individual test result with certainty, and because many people testing positive for HIV frequently received more than one test, the number of positive tests exceeded the numbers of persons with newly diagnosed HIV. **For this reason, the number of positive HIV tests received annually during this period of observation was used only as a very rough indicator of the incidence of newly diagnosed HIV, influenced not only by the true incidence rate, but also by norms of HIV testing, including the rate at which high-risk individuals sought testing, the size of groups such as prison inmates for whom testing was mandatory, and the average number of additional tests sought after an initial positive test result.**

From the year 2000 onward, reports of positive HIV test results have contained unique personal identifiers with which duplicate test results may be culled from the aggregate with great certainty, allowing greater confidence in the interpretation of HIV data. In 2006 Rhode Island moved to name-based HIV reporting as a part of nationwide approach mandated by the CDC. Since July 2006 all HIV cases are being reported to the Rhode Island Department of Health with name. Both the CDC and the department of Health are hopeful that in the long run this will contribute to accurately capture the disease burden and risk.

There were 1102 new cases of HIV diagnosed in the period from January 1, 2000 to December 31, 2007. Table 5 represents a breakdown of those 1102 cases by demographic characteristics and year of diagnosis.

Table 5. Demographic Characteristics of RI HIV Cases, Jan. 1, 2002 to Dec. 31, 2007

| Demographic Characteristics | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------------|------------|------------|------------|------------|------------|------------|
| Gender | | | | | | |
| Male | 106 (72%) | 103 (77%) | 123 (69%) | 81 (65%) | 90 (73%) | 98 (81%) |
| Female | 42 (28%) | 31 (23%) | 55 (31%) | 43 (35%) | 33 (27%) | 23 (19%) |
| Total | 148 (100%) | 134 (100%) | 178 (100%) | 124 (100%) | 123 (100%) | 121 (100%) |
| Age Group | | | | | | |
| <13 | <5 * | <5 * | <5 * | <5* | <5 * | <5* |
| 13-19 | 5 (3%) | <5 * | <5 * | <5* | <5 * | <5* |
| 20-29 | 36 (24%) | 27 (20%) | 36 (20%) | 23 (19%) | 23 (19%) | 6 (5%) |
| 30-39 | 57 (39%) | 53 (40%) | 69 (39%) | 50 (40%) | 42 (34%) | 21 (17%) |
| 40-49 | 41 (28%) | 32 (24%) | 59 (33%) | 35 (28%) | 38 (31%) | 37 (31%) |
| 50+ | 9 (6%) | 17 (13%) | 10 (6%) | 15 (12%) | 17 (14%) | 34 (28%) |
| Total | 148 (100%) | 134 (100%) | 178 (100%) | 124 (100%) | 123 (100%) | 121 (100%) |
| Race/Ethnicity | | | | | | |
| White | 65 (44%) | 43 (32%) | 78 (44%) | 57 (46%) | 63 (51%) | 62 (51%) |
| African American | 50 (34%) | 50 (37%) | 45 (25%) | 35 (28%) | 34 (28%) | 30 (25%) |
| Hispanic | 33 (22%) | 38 (28%) | 51 (29%) | 29 (23%) | 22 (18%) | 25 (21%) |
| Asian | <5 * | <5 * | <5 * | <5* | <5 * | <5 * |
| Native American | <5 * | <5 * | <5 * | <5* | <5 * | <5 * |
| Total | 148 (100%) | 134 (100%) | 178 (100%) | 124 (100%) | 123 (100%) | 121 (100%) |
| Risk Factor | | | | | | |
| MSM | 43 (29%) | 45 (34%) | 58 (33%) | 45 (36%) | 51 (41%) | 47 (39%) |
| IDU | 25 (17%) | 13 (10%) | 23 (13%) | 12 (10%) | 12 (10%) | 18 (15%) |
| MSM / IDU | <5 * | 5 (4%) | 5 (3%) | <5* | <5* | 6(5%) |
| Heterosexual Contact | 22 (15%) | 25 (19%) | 36 (20%) | 20 (16%) | 35 (28%) | 11 (9%) |
| Transfusion | <5 * | <5 * | <5 * | 6 (5%) | <5* | <5* |
| Mother with HIV/HIV Risk | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * |
| No Risk Specified | 56 (39%) | 44 (33%) | 53 (30%) | 37 (30%) | 21 (17%) | 35 (29%) |
| Total | 148 (100%) | 134 (100%) | 178 (100%) | 124 (100%) | 123 (100%) | 121 (100%) |
| County of Residence | | | | | | |
| Homeless | <5 * | <5 * | <5 * | <5* | <5 * | <5 * |
| Bristol | <5 * | <5 * | <5 * | <5* | <5 * | <5 * |
| Kent | 8 (5%) | <5 * | 15 (8%) | 7 (6%) | 6 (5%) | 6 (5%) |
| Newport | 6 (4%) | <5 * | 6 (3%) | 7 (6%) | 5 (4%) | 7 (6%) |
| Providence | 126 (85%) | 122 (91%) | 147 (83%) | 105 (85%) | 105 (85%) | 99 (82%) |
| Washington | <5 * | <5 * | 8 (5%) | <5* | 6 (5%) | 6 (5%) |
| Total | 148 (100%) | 134 (100%) | 178 (100%) | 124 (100%) | 123 (100%) | 121 (100%) |

Table 6. Demographic Characteristics of RI HIV cases 2000-2007:

| Demographic Characteristics | Numbers, % |
|-----------------------------|-------------|
| Gender | |
| Male | 795 (72%) |
| Female | 307 (28%) |
| Total | 1102 (100%) |
| Age Group | |
| <13 | 5 (<1%) |
| 13-19 | 31 (3%) |
| 20-29 | 224 (20%) |
| 30-39 | 423 (39%) |
| 40-49 | 310 (28%) |
| 50+ | 109 (9%) |
| Total | 1102 (100%) |
| Race/Ethnicity | |
| White | 465 (42%) |
| African American | 332 (30%) |
| Hispanic | 281 (25%) |
| Asian | 19 (2%) |
| Native American | 5 (<1%) |
| Total | 1102 (100%) |
| Risk Factor | |
| MSM | 376 (34%) |
| IDU | 159 (14%) |
| MSM / IDU | 28 (3%) |
| Heterosexual Contact | 248 (23%) |
| Transfusion | 17 (1%) |
| Mother with HIV/HIV Risk | <5* |
| No Risk Specified | 270 (25%) |
| Total | 1102 (100%) |
| County of Residence | |
| Homeless | <5* |
| Bristol | 14 (1%) |
| Kent | 64 (6%) |
| Newport | 44 (4%) |
| Providence | 938 (85%) |
| Washington | 39 (4%) |
| Total | 1102 (100%) |

Figure 11. Rhode Island HIV Incidence 2000-2007

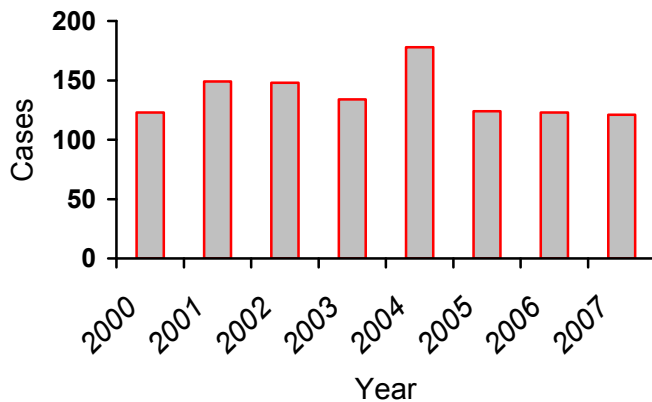


Figure 12. Rhode Island HIV Incidence by Gender 2000-2007

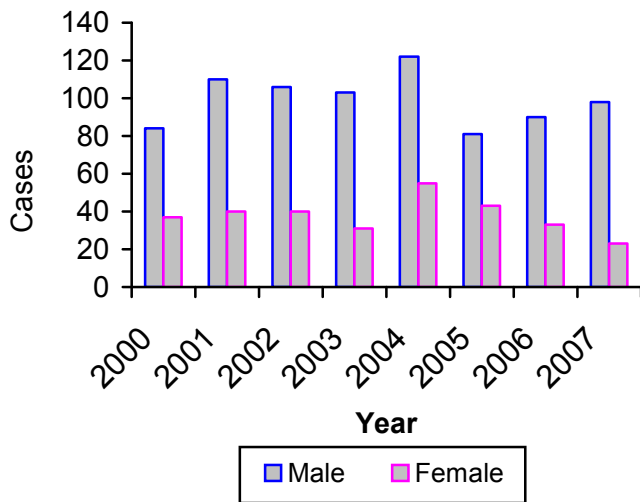
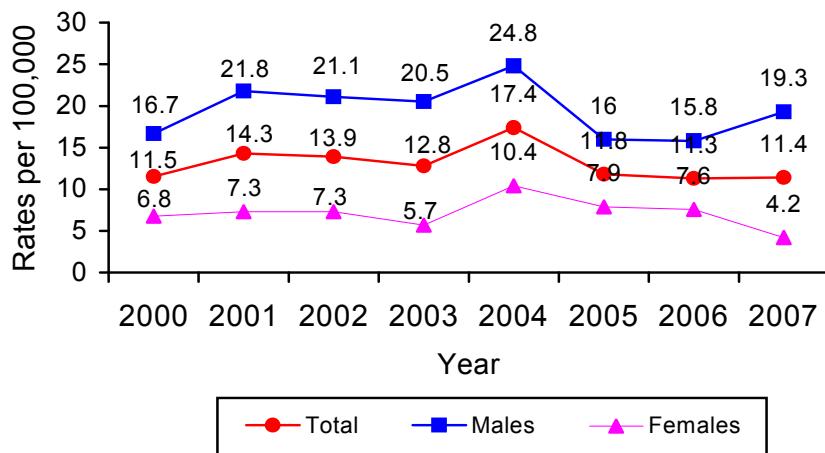


Figure 13. Rhode Island Reported HIV Cases per 100,000 Populations, 2000-2007



Rates are based on the 2000 RI population, and 2007 projection as calculated by the U.S. Census Bureau

The mode of exposure and demographic characteristics of those infected with HIV differ significantly between both genders. Tables 7 and 8 illustrate these differences among males and females respectively.

Table 7. Demographic Characteristics of **Male HIV Cases**, January 1, 2002 to December 31, 2007.

| Demographic Characteristics | Number of Newly Diagnosed Cases of HIV in Male | | | | | | |
|-----------------------------|--|------------|------------|-----------|-----------|-----------|-------------------|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Total (2002-2007) |
| Age Group | | | | | | | |
| <13 | <5 * | <5 * | <5 * | <5* | <5* | <5* | <5 * |
| 13-19 | <5 * | <5 * | <5 * | <5* | <5* | <5* | 10 (2%) |
| 20-29 | 27 (26%) | 18 (18%) | 19 (15%) | 16 (20%) | 16 (18%) | 17 (17%) | 113 (19%) |
| 30-39 | 40 (38%) | 43 (42%) | 46 (37%) | 27 (33%) | 29 (32%) | 30 (31%) | 215 (36%) |
| 40-49 | 28 (26%) | 26 (25%) | 46 (37%) | 30 (37%) | 30 (33%) | 29 (30%) | 189 (32%) |
| 50+ | 7 (7%) | 15 (15%) | 10 (8%) | 7 (9%) | 12 (13%) | 17 (17%) | 68 (11%) |
| Total | 106 (100%) | 103 (100%) | 123 (100%) | 81 (100%) | 90 (100%) | 98 (100%) | 598 (100%) |
| Race/Ethnicity | | | | | | | |
| White | 51 (48%) | 37 (36%) | 64 (52%) | 41 (51%) | 54 (60%) | 53 (54%) | 300 (50%) |
| African American | 37 (35%) | 33 (32%) | 20 (16%) | 22 (27%) | 17 (19%) | 22 (22%) | 151 (25%) |
| Hispanic | 18 (17%) | 30 (29%) | 36 (29%) | 16 (20%) | 15 (17%) | 21 (21%) | 136 (23%) |
| Asian/Pac Islander | <5 * | <5 * | <5 * | <5* | <5* | <5* | 11 (2%) |
| Native American | <5 * | <5 * | <5 * | <5* | <5* | <5* | <5 * |
| Total | 106 (100%) | 103 (100%) | 123 (100%) | 81(100%) | 90 (100%) | 98 (100%) | 598 (100%) |
| Risk Factor | | | | | | | |
| MSM | 43 (41%) | 45 (44%) | 58 (47%) | 45 (56%) | 52 (58%) | 47 (48%) | 290 (48%) |
| IDU | 16 (15%) | 9 (9%) | 15 (12%) | 7 (9%) | 8 (9%) | 16 (16%) | 71 (12%) |
| MSM / IDU | <5 * | 5 (5%) | 5 (4%) | <5 * | <5* | 6 (6%) | 24 (4%) |
| Heterosexual Contact | 11 (10%) | 12 (12%) | 16 (13%) | 9 (11%) | 13 (14%) | <5* | 61 (10%) |
| Transfusion | <5 * | <5 * | <5 * | <5* | <5* | <5 * | <5 * |
| Mother with HIV/HIV Risk | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * | |
| No Risk Specified | 36 (34%) | 31 (30.1%) | 29 (23.6%) | 15 (19%) | 13 (14%) | 25 (26%) | 149 (25%) |
| Total | | 103 (100%) | 123 (100%) | 81 (100%) | 90 (100%) | 98 (100%) | 598 (100%) |

* Cell contained less than five cases

Table 8. Demographic Characteristics of **Female HIV Cases**, January 1, 2002 to December 31, 2007.

| Demographic Characteristics | Number of Newly Diagnosed Cases of HIV in Females | | | | | | |
|-----------------------------|---|-----------|-----------|-----------|-----------|-----------|-------------------|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Total (2002-2007) |
| Age Group | | | | | | | |
| <13 | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * | 5 (2%) |
| 13-19 | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * | 10 (4%) |
| 20-29 | 9 (23%) | 10 (32%) | 17 (31%) | 7 (16%) | 9 (27%) | <5 * | 56 (24%) |
| 30-39 | 18 (45%) | 10 (32%) | 23 (42%) | 23(55%) | 12 (36%) | 7 (30%) | 93 (40%) |
| 40-49 | 12 (29%) | 6 (19%) | 13 (24%) | 5 (12%) | 6 (18%) | 5 (22%) | 47 (20%) |
| 50+ | <5 * | <5 * | <5 * | 8 (19%) | 5 (15%) | <5 * | 25 (11%) |
| Total | 42 (100%) | 31 (100%) | 55 (100%) | 43 (100%) | 33 (100%) | 23 (100%) | 236 (100%) |
| Race/Ethnicity | | | | | | | |
| White | 13 (33%) | 6 (19%) | 14 (26%) | 16 (37%) | 8 (27%) | 9 (40%) | 66 (28%) |
| African American | 14 (35%) | 15 (48%) | 25 (46%) | 13 (30%) | 17 (52%) | 8 (35%) | 92 (39%) |
| Hispanic | 15 (36%) | 10 (32%) | 15 (27%) | 13 (30%) | 8 (27%) | <5 * | 65 (28%) |
| Asian/Pacific Islander | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * | 11 * |
| Native American | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * | <5 * |
| Total | 42 (100%) | 31 (100%) | 55 (100%) | 43 (100%) | 33 (100%) | 23 (100%) | 236 (100%) |
| Risk Factor | | | | | | | |
| IDU | 9 (21%) | <5 * | 8 (15%) | 5 (12%) | <5* | <5* | 30 (13%) |
| Heterosexual Contact | 9 (23%) | 13 (42%) | 21 (38%) | 11 (26%) | 21 (64%) | 9 (40%) | 101 (43%) |
| Transfusion | <5 * | <5 * | <5 * | 5 (12%) | <5* | <5* | 12 (5%) |
| Mother with HIV/HIV Risk | <5* | <5* | <5* | <5* | <5* | <5* | |
| No Risk Specified | 22 (52%) | 13 (42%) | 24 (44%) | 22 (51%) | 9 (27%) | 10 (43%) | 93 (39%) |
| Total | 42 (100%) | 31 (100%) | 55 (100%) | 43 (100%) | 33 (100%) | 23 (100%) | 236 (100%) |

* Cell contained less than five cases

HIV Highlights

Between January 1, 2000 and December 31, 2007, there were 1102 Rhode Island residents newly diagnosed with HIV and reported to HEALTH-RI. This number provides a minimum estimate of HIV infection, as it does not include HIV infected individuals who have not been tested yet and those who get tested anonymously. (Table5).

Of the 1102 HIV cases diagnosed and reported to HEALTH-RI from January 1, 2000 – December 31, 2007:

- ❑ Males accounted for 72% of the cases and females accounted for 28%.
- ❑ The majority of cases were between the ages of 30 and 39 (39%).
- ❑ ***By Race/Ethnicity:***
 - Among men, Whites accounted for the majority of case (50%), followed by African Americans (25%) and Hispanics (23%).
 - Among Women, African Americans accounted for the majority of cases (39%), followed by Hispanics (28%) and Whites (28%).
- ❑ ***By mode of exposure to HIV:***
 - Among men, ‘MSM’ is the leading mode of exposure (48% of cases), followed by ‘No Risk Specified’ (20%) and Intravenous Drug Use (12%).
 - Among Women, ‘Heterosexual Contact’ is the leading mode of exposure (43% of cases), followed by ‘No Risk Specified’ (39%).
- ❑ ***By county of residence:***
 - The majority of the cases were from Providence county.

3) Who is experiencing differential impact from the HIV/AIDS epidemic?

➤ MSM ‘Men who have sex with men’

Despite an overall decrease in the rates of HIV and AIDS incidence, MSM continues to be the leading exposure category for HIV infection among men. Figure 14 illustrates this finding over the period from January 1, 2000 to December 31, 2007. The second highest exposure category is Risk Not Specified. The Surveillance staff is working diligently to reduce the number associated with Risk Not Specified and plans to become more aggressive with providers completing case reports and client follow-up. Whether this represents a true lack of knowledge as to how these individuals were infected or a reluctance to reveal an MSM orientation requires further exploration.

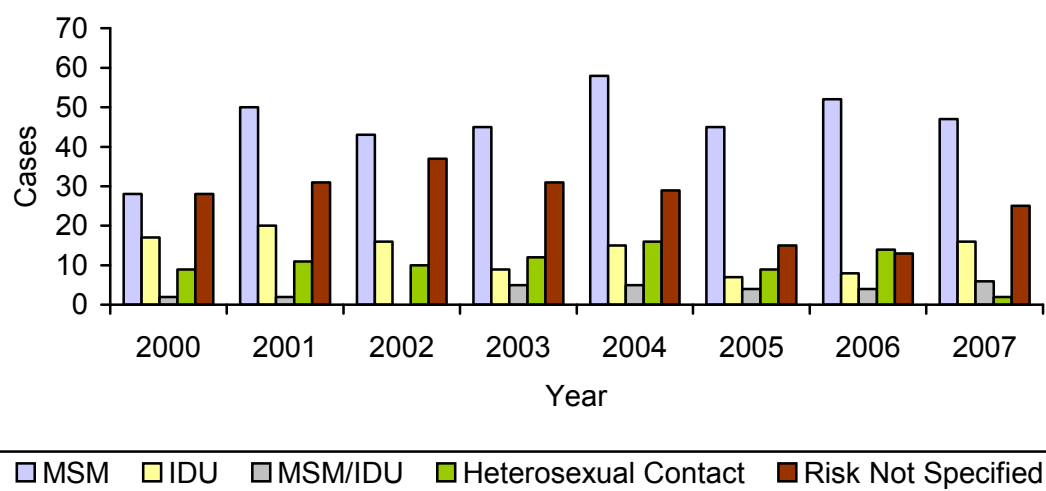


Figure 14. HIV (not AIDS) Incidence among Men by Exposure Category 2000-2007.

As for the racial distribution of HIV infection among the MSM population, Whites account for the vast majority of MSM infected with 68%, compared to 16% for both African Americans and Hispanics. HIV disproportionately affects African American and Hispanic MSMs; they represent 14% of Rhode Island's population and account for 34% of the MSM infected with HIV. Looking at the rates per 100,000 illustrates a much clearer picture. Figures 15 and 16, illustrate these findings in the period from January 1, 2000 to December 31, 2007.

Figure 15. HIV Infected MSM by Race, 2000-2007

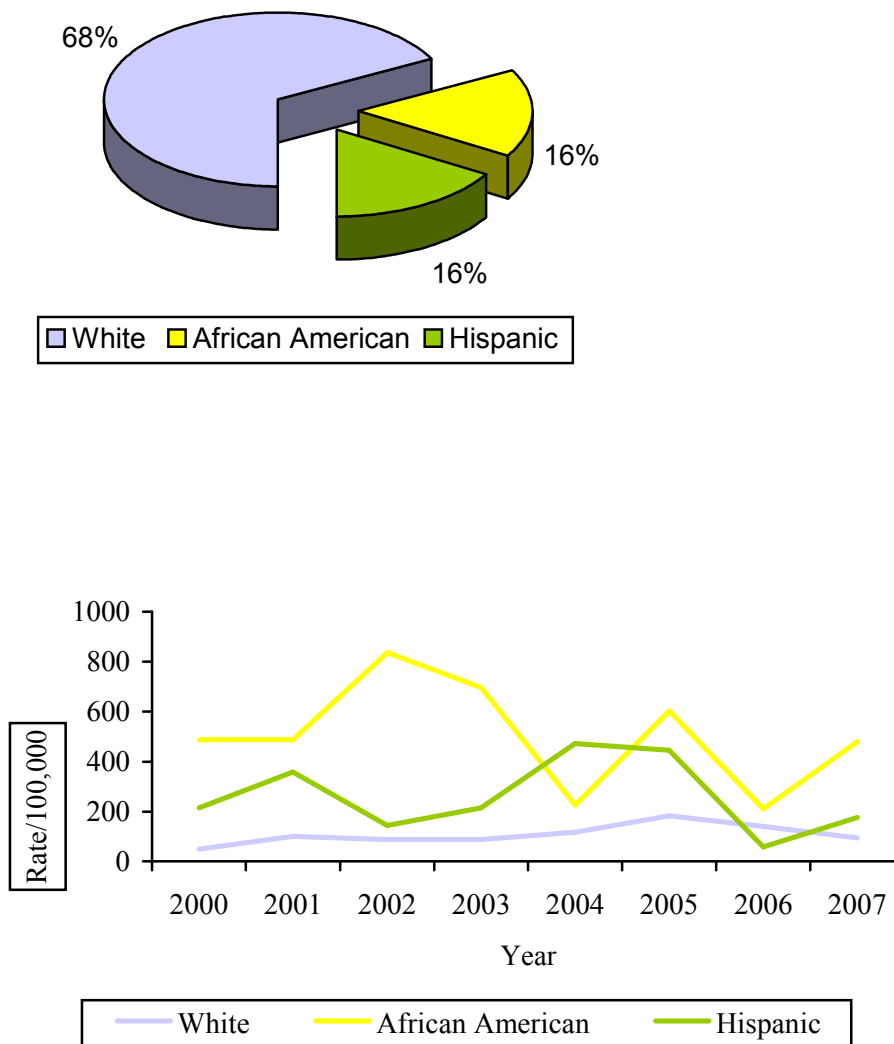
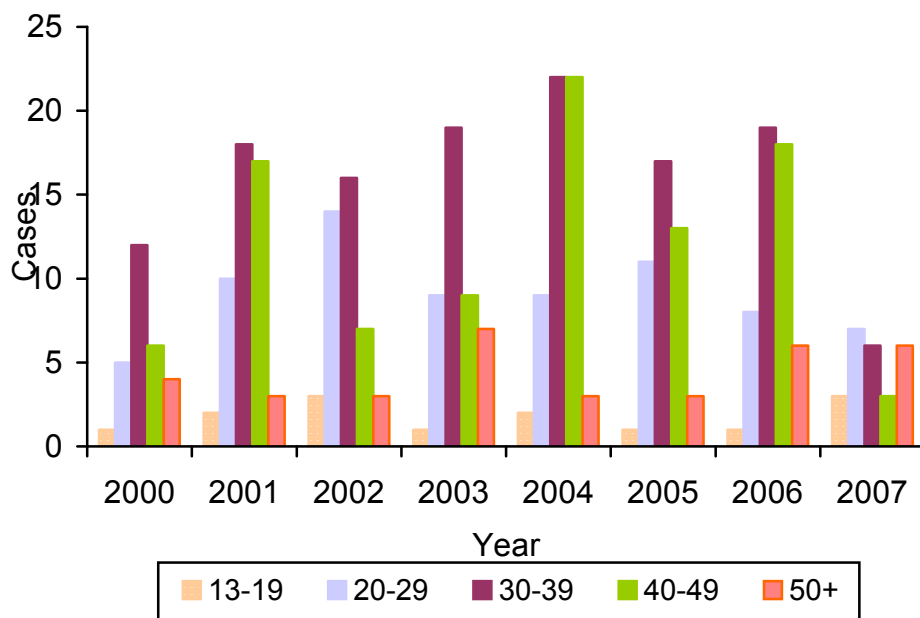


Figure 16. HIV Rates among MSM by Race, 2000-2007

This graph was developed with the assumption that MSM comprise about 9% of the adult male population 13 years of age and older in Rhode Island. Rates are based on the 2007 RI population as estimated by the U.S. Census Bureau

The age distribution of MSM infected with HIV, from January 1, 2000 to December 31, 2007, follows a similar pattern to the overall individuals infected with HIV, with the majority between 30 – 39 years of age. However in 2007 predominant age groups were 20-29 and 30-39 respectively.

Figure 17. HIV Infected MSM by Age and Year of Diagnosis, 2000-2007



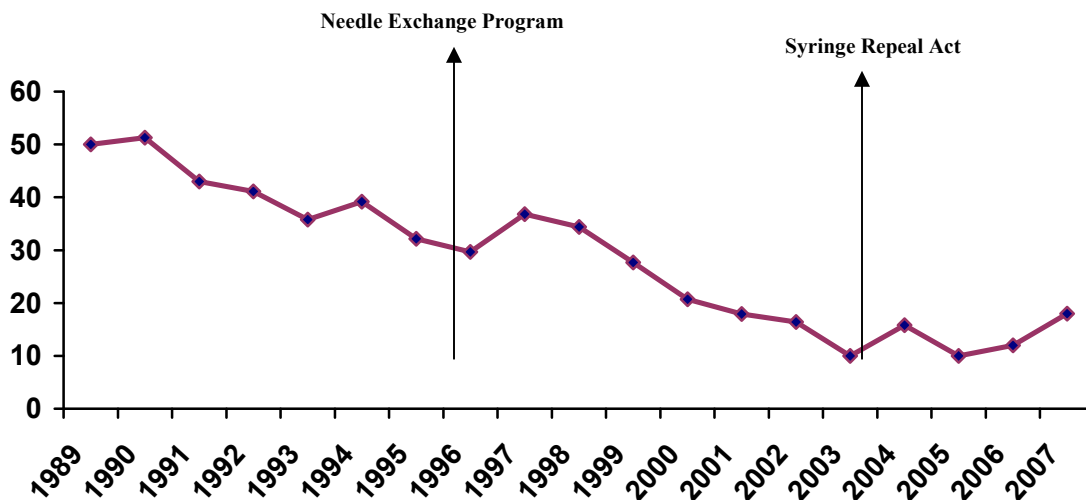
➤ IDU ‘Intravenous Drug Users’

While Intravenous Drug Use remains a significant risk factor for HIV infection, there has been a steady decline in both HIV (not AIDS) and AIDS cases associated with IDU. HIV infection due to intravenous drug use as a risk factor dropped from 50% in 1989 to 15% in 2007 among all other risk factors. The decline in both AIDS and HIV cases associated with IDU follows a national trend.

We believe that a myriad of factors contributed to this decline. Education among IDUs on safer needle use practices, availability of clean needles and needle cleaning kits through needle exchange programs, the availability of non-prescription needle sales at pharmacies and a general shift away from parenteral drugs among illicit drug users in the past years all may account for the dramatic decrease of HIV among injecting drug users.

Rhode Island is one of the states that have a Needle Exchange Program; the Rhode Island Needle Exchange Program was launched in 1995. The Syringe Repeal Act was passed in Rhode Island in 2002, which now allows individuals to purchase needles at pharmacies without the need of a prescription. The following chart shows the overall decline in HIV cases due to IDU in the period from 1989-2007.

Figure 18. Percentage of HIV Cases with IDU as their Identified Mode of Transmission: 1989-2007



Twenty five percent (25%) of HIV infected Hispanic men and eighteen percent (18%) of HIV infected Hispanic women acquired their infection through IDU in the period from 2000-2007.

Figure 19.
HIV Infected Hispanic Men By
Mode of Exposure, 2000-2007

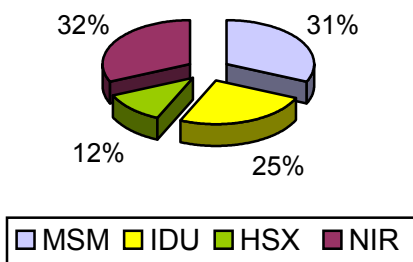
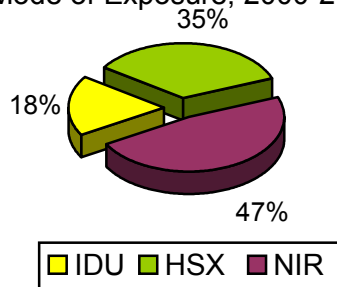


Figure 20.
HIV Infected Hispanic Women
By
Mode of Exposure, 2000-2007



Ten percent (10%) of HIV infected African American men and fifteen (15%) percent of HIV infected African American women acquired their infection through IDU in the period from 2000-2007.

Figure 21.
HIV Infected African American Men
By Mode of Exposure,
2000-2007

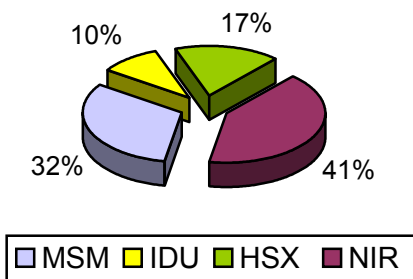
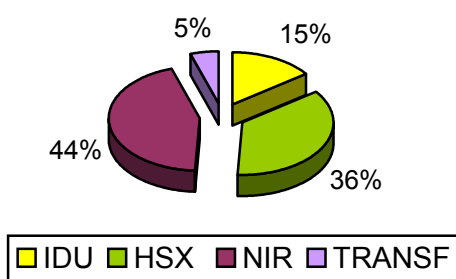


Figure 22.
HIV Infected African American
Women By Mode of Exposure,
2000-2007



Eleven percent (11%) of HIV infected White men and twenty one percent (21%) of HIV infected White women acquired their infection through IDU in the period from 2000-2007.

Figure 23. HIV Infected White Men By Mode of Exposure, 2000-2007

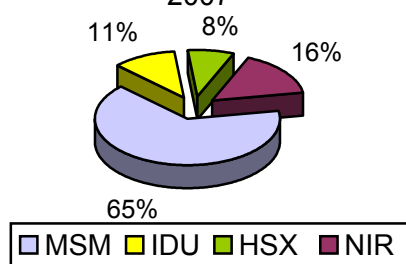
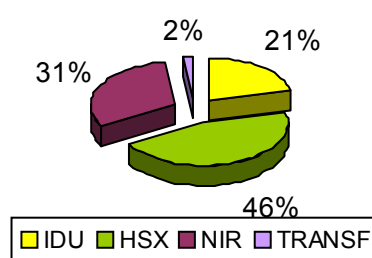


Figure 24. HIV Infected White Women By Mode of Exposure, 2000-2007



While IDU remains a major risk factor for HIV for both men and women, a greater proportion of women are infected with HIV through IDU. Among Rhode Island women, a greater proportion of minority women (African American and Hispanic) are infected through IDU when compared with their white counterparts. Tables 9 and 10 show the demographic characteristics of the HIV infected men and women with IDU as their mode of exposure.

Table 9. Demographic Characteristics of Cumulative HIV Infected Male IDU cases: 2000-2007

| Demographic characteristics | Total |
|-----------------------------|------------|
| Race | |
| White | 36 (36%) |
| Black | 19 (19%) |
| Hispanic | 45 (45%) |
| Asian/Pac Islander | <5* |
| Native American | <5* |
| Total | 100 (100%) |
| Age Group | |
| 13-19 | <5* |
| 20-29 | 10 (10%) |
| 30-39 | 31 (31%) |
| 40-49 | 47 (47%) |
| 50+ | 12(12%) |
| Total | 100 (100%) |

Table10. Demographic Characteristics of Cumulative HIV Infected Female IDU cases: 2000-2007

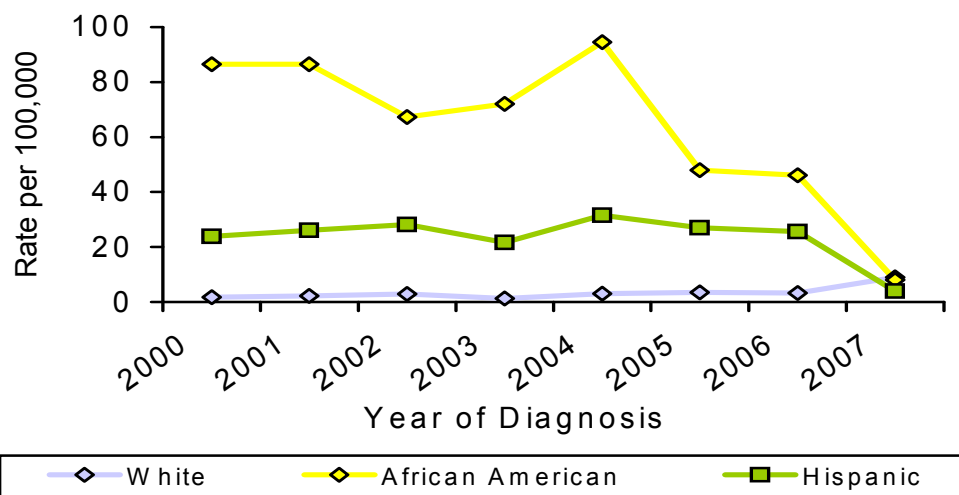
| Demographic characteristics | Total |
|-----------------------------|--------------|
| Race | |
| White | 23 (43%) |
| Black | 15 (28%) |
| Hispanic | 15 (28%) |
| Asian/Pac Islander | <5 * |
| Native American | <5 * |
| Total | 53 (100%) |
| Age Group | |
| 13-19 | <5* |
| 20-29 | 11 (21%) |
| 30-39 | 28 (53%) |
| 40-49 | 13 (25%) |
| 50+ | <5* |
| Total | 53 (100%) |

➤ Minority Women

In the period between January 1, 2000 to December 31, 2007, 307 women were diagnosed with HIV (not AIDS) in Rhode Island. African American and Hispanic women who represent 14% of Rhode Island's female population accounted for 70% of those cases. The impact of HIV on African American and Hispanic women far exceeds that on African American and Hispanic men who account for 48% of all men diagnosed with HIV during the same time period.

While African Americans and Hispanics of both genders are disproportionately affected by the epidemic the impact on minority women is tremendous. Figure 25 best illustrates the disproportionate impact of HIV on minority women as it shows the rate of HIV infection by race per 100,000 women.

Figure 25. HIV Rates among Women by Race/Ethnicity, Rhode Island, January 1, 2000-December 31, 2007

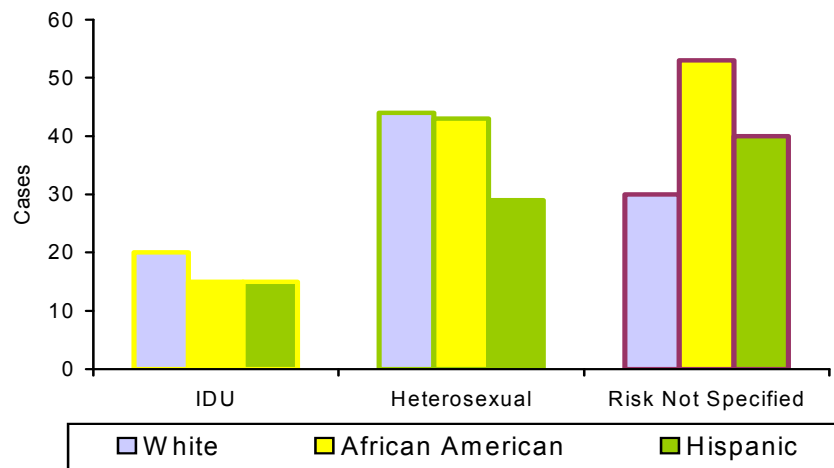


Rates are per 100,000 populations. Rates are based on 2000 RI population and 2007 projection as calculated by the U.S. Census Bureau.

As for the exposure category, White women have the highest number of cases with IDU as their mode of exposure to HIV, while African American and Hispanic women have a highest number of cases with heterosexual contact and unknown risk factors as their mode of exposure to HIV.

It is worth mentioning that a large proportion of African American and Hispanic women have an unspecified risk of exposure. Whether this represents a true lack of knowledge as to how they were infected or not, requires further investigation. Figure 18 illustrates the aforementioned findings.

Figure 26. HIV cases Among Women by Exposure Category, Rhode Island, January 1, 2000-December 31, 2007



➤ **Inmates of the Rhode Island ACI ‘Adult Correctional Institution’**

Prison inmates accounted for 26 percent of newly diagnosed HIV cases (31 of 121 cases) in 2000, 21 percent (31 of 150 cases) in 2001, 19 percent (28 of 146 cases) in 2002, 22 percent (29 of 134 cases) in 2003, 14 percent (25 of 178 cases) in 2004 and 13 percent (16 of 124 cases) in 2005 and 2006 (16 out of 123 cases) and 17 percent (21 out of 121 cases) in 2007. The demographic characteristics of prison inmates newly diagnosed with HIV were similar in most years. Most cases of HIV were diagnosed among persons between the ages of 30 and 39 and most were males. Among prison inmates newly diagnosed with HIV, most were African Americans, followed closely by Hispanics and then Whites. Risk Not Specified and IDU were more commonly associated with HIV infection among prison inmates than other risk factors.

Table 11. Demographic Characteristics of RI HIV cases from Adult Correctional Institution: 2000-2007

| Demographic Characteristics | Numbers (%) |
|------------------------------|-------------|
| Gender | |
| Male | 170 (87%) |
| Female | 26 (13%) |
| Total | 196 (100%) |
| Race | |
| White | 59 (30%) |
| African American | 69 (35%) |
| Hispanic | 65 (33%) |
| Asian/Pacific Islander | <5* |
| Native Am. /Alaska Native | <5* |
| Total | 196 (100%) |
| Age Group | |
| 13-19 | <5* |
| 20-29 | 38 (19%) |
| 30-39 | 89 (45%) |
| 40-49 | 60 (31%) |
| 50+ | 8 (4%) |
| Total | 196 (100%) |
| Exposure Category | |
| MSM | 25 (13%) |
| IDU | 51 (26%) |
| MSM/IDU | <5* |
| Heterosexual Contact | 15 (8%) |
| Hemophilia | <5* |
| No Risk Specified | 101 (51%) |
| Total | 196 (100%) |

- *Cell contained less than 5 cases*

➤ **Persons Unaware of Their HIV Status**

The Centers for Disease Control and Prevention (CDC) estimates that 24% to 27% of those infected with HIV are unaware of their status. Many speculate that this group of undiagnosed individuals represents the hidden population. These may be individuals whom do not seek medical treatment, and hence are unable to experience a healthcare provider offering the HIV test. In addition, many of these individuals do not perceive they are at risk for HIV. In post case interviews and focus groups this components reveals itself frequently, particularly within the subgroup of women who believe they are in monogamous sexual relationships, when only to find out later that they are HIV positive and unable to determine “their risk.” Finally those that are undiagnosed may be isolated from available and accessible health education or behavioral risk reduction programs. As a result do not receive messages regarding potential risk. Research CDC has done reveals that without the knowledge of HIV status individuals are more likely to transmit the disease.

Individuals who became aware of their positive HIV status, around the time when they were diagnosed with AIDS, are persons who were unaware of their infection for the most part and were diagnosed late in the course of their infection. Thus, they are representative of those that are infected but unaware of their status.

Two hundred and seventy seven individuals become aware of their positive HIV status when diagnosed with AIDS in the period from 2000-2007, which is 25% of the 1102 individuals diagnosed with HIV in the same time period.

Thirty percent of the individuals who became aware of their HIV status when diagnosed with AIDS were females, 70% were males. The majority of those who become aware of their HIV status when diagnosed with AIDS were Whites 41% (who represent 85% of the population), followed by African Americans 32% (who represent 5% of the population), and Hispanics 25% (who represent 9% of the population). **African Americans and Hispanics make up the vast majority of those who become aware of their HIV status when diagnosed with AIDS.** The primary risk factor among those who become aware of their HIV status when diagnosed with AIDS is heterosexual contact (40%), followed by MSM (30%) and IDU (19%).

Table 12 provides a comparison of demographic characteristics among those who become aware of their positive HIV status when diagnosed with AIDS and those diagnosed with HIV alone.

Table 12. Comparison of the Demographic Characteristics of Individuals Diagnosed with HIV Only and Individuals Who Become Aware of Their Positive HIV Status When Diagnosed with AIDS, January 1, 2000 to December 31, 2007.

| Demographic Characteristics | Individuals Diagnosed with HIV (only), 2000-2007 | Individuals Diagnosed with HIV and AIDS, 2000-2007 |
|-----------------------------|--|--|
| Gender | | |
| Male | 607 (74%) | 194 (70%) |
| Female | 216 (26%) | 83 (30%) |
| Total | 823 (100%) | 277 (100%) |
| Age Group | | |
| <13 | 6 (<1%) | <5 * |
| 13-19 | 29 (4%) | <5 * |
| 20-29 | 186 (23%) | 27 (10%) |
| 30-39 | 324 (39%) | 103 (37%) |
| 40-49 | 203 (25%) | 108 (39%) |
| 50+ | 75 (9%) | 33 (12%) |
| Total | 823 (100%) | 277 (100%) |
| Race/Ethnicity | | |
| White | 375 (45%) | 113 (41%) |
| African American | 228 (28%) | 88 (32%) |
| Hispanic | 204 (25%) | 68 (25%) |
| Asian | 11 (1%) | <5 * |
| Native American | 5 (<1%) | <5 * |
| Total | 823 (100%) | 277 (100%) |
| Risk Factor | | |
| MSM | 285 (35%) | 82 (30%) |
| IDU | 112 (14%) | 43 (19%) |
| MSM / IDU | 21 (2%) | 7 (2%) |
| Heterosexual Contact | 104 (13%) | 111 (40%) |
| Transfusion | <5 * | <5 * |
| No Risk Specified | 294 (36%) | 25 (9%) |
| Mother w HIV/HIV risk | <5* | <5* |
| Total | 823 (100%) | 277 (100%) |

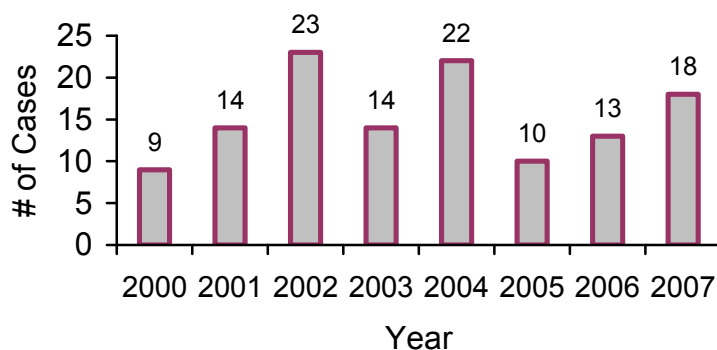
* Cell contained less than five cases

➤ Youth and HIV

In the United States, HIV-related death has the greatest impact on young and middle-aged adults, particularly racial and ethnic minorities. In 1999, HIV was the fifth leading cause of death for Americans between the ages of 25-44. Among African American men in this age group, HIV has been the leading cause of death since 1991. In 1999, among black women 25-44 years old, HIV infection was the third leading cause of death. Many of these young adults likely were infected in their teens and twenties. It has been estimated that at least half of all new HIV infections in the United States are among people under 25, with the majority of young people being infected sexually (Rosenberg PS, Biggar RJ, Goedert JJ. Declining age at HIV infection in the United States [letter]. *New Engl J Med* 1994; 330:789-90)

Thirteen percent (141 out of 1101) of all the HIV cases diagnosed in Rhode Island in the period from January 1, 2000 to December 31, 2007 occurred in individuals 13 – 24 years of age. There has been a steady rise in the incidence of HIV among this age group in the past couple of years, with a slight decrease in 2005. Figure 27 illustrates these findings.

Figure 27. HIV Incidence among Youth (13-24 years old), 2000-2007



Of the 141 cases diagnosed among youth 83 were males and 58 were females. Youth of racial and ethnic minorities were heavily impacted with 33% occurring in African American youth, 22% occurring in Hispanic youth and 44% occurring in White youth among the new cases in 2007.

Among males, Men who Have Sex with Men (66%) was the most common risk category followed by No specified Risk (22%). Among females Heterosexual Contact (43%) was the most common risk category closely followed by No specified risk (42%). Figures 28 and 29 illustrate these findings.

Figure 28. HIV Cases among Male Youth by Exposure Category, Rhode Island, 2000-2007

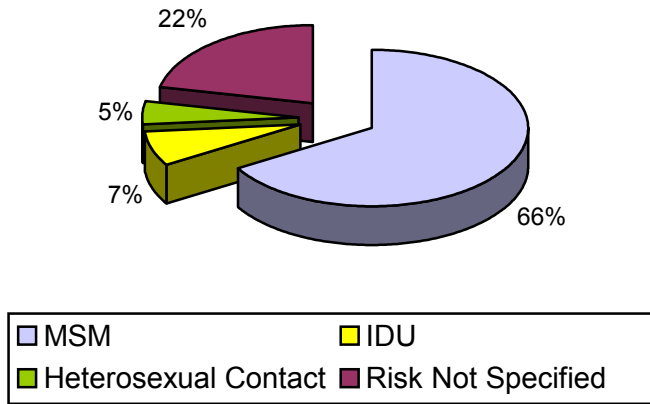
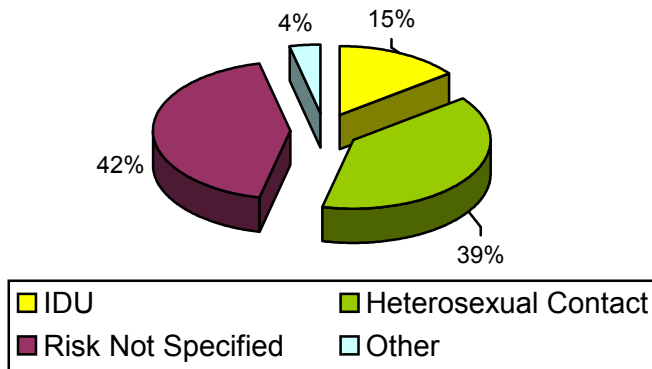


Figure 29. HIV Cases among Female Youth by Exposure Category, Rhode Island, 2000-2007



Surrogate Data in Rhode Island

STD Epidemiology Summary: Rhode Island, 2007

Table 13. Demographic characteristics of reported chlamydia, gonorrhea and syphilis cases, Rhode Island 2007

| Disease | Chlamydia | Gonorrhea | Syphilis (Primary, Secondary) | Syphilis (Early Latent)* | Syphilis (All Late Stages) |
|---|-----------|-----------|-------------------------------------|--------------------------------|----------------------------------|
| Characteristics: | | | | | |
| Total # of cases | 3,177 | 402 | 36 | 10 | 30 |
| Case rate per 100,000 population (based on 2007 estimate of the population) | 300.3 | 38.0 | 3.4 | 0.9 | 2.8 |
| Gender | | | | | |
| Male | 892 | 232 | 43 | | 21 |
| Female | 2,282 | 169 | <5 | | 9 |
| Unknown | <5 | <5 | 0 | | 0 |
| Race/Ethnicity | | | | | |
| Non-Hispanic White | 973 | 146 | 32 | | 8 |
| Non-Hispanic Black | 648 | 137 | 5 | | 5 |
| Hispanic (All races) | 820 | 67 | 5 | | 11 |
| Asian/Pacific Islander | 83 | 6 | <5 | | 0 |
| American Indian/Alaskan | | | | | |
| Native | 7 | 0 | <5 | | 0 |
| Other/Unknown | 646 | 46 | <5 | | 6 |
| Age (Years) | | | | | |
| 10 – 14 | 41 | <5 | 0 | | 0 |
| 15 – 19 | 1,060 | 81 | <5 | | 0 |
| 20 – 24 | 1,156 | 128 | <5 | | <5 |
| 25 – 29 | 487 | 65 | <5 | | <5 |
| 30 – 34 | 202 | 37 | 6 | | 6 |
| 35 – 39 | 114 | 36 | 10 | | 5 |
| 40 – 44 | 56 | 22 | 10 | | <5 |
| 45 – 54 | 41 | 24 | 9 | | 7 |
| 55 – 64 | 12 | 6 | <5 | | <5 |
| 65 + | <5 | <5 | 0 | | 0 |
| Unknown | 5 | 0 | 0 | | 0 |

* The ten cases of early latent syphilis in 2007 are combined with thirty-six cases of primary and secondary syphilis for analysis by demographic characteristics. The forty-six cases constitute the category “Early syphilis”.

Table 13. (cont.) Demographic characteristics of reported chlamydia, gonorrhea and syphilis cases, Rhode Island 2007

| Disease | Chlamydia | Gonorrhea | Syphilis (Primary, Secondary) | Syphilis (Early latent) | Syphilis (All Late Stages) |
|-----------------|-----------|-----------|-------------------------------------|-------------------------------|-------------------------------------|
| Residence | | | | | |
| County | | | | | |
| Bristol | 67 | <5 | 0 | | 0 |
| Kent | 227 | 20 | <5 | | 0 |
| Newport | 121 | 11 | <5 | | <5 |
| Providence | 2,562 | 359 | 39 | | 26 |
| Washington | 185 | 7 | <5 | | 0 |
| Unknown | 15 | <5 | 0 | | 0 |
| City/Town | | | | | |
| Barrington | 12 | <5 | 0 | | 0 |
| Bristol | 35 | 0 | 0 | | 0 |
| Burrillville | 19 | <5 | 0 | | 0 |
| Central Falls | 127 | 21 | <5 | | <5 |
| Charlestown | 14 | <5 | 0 | | 0 |
| Coventry | 25 | 5 | <5 | | 0 |
| Cranston | 252 | 32 | 5 | | <5 |
| Cumberland | 34 | <5 | <5 | | <5 |
| East Greenwich | 7 | <5 | 0 | | 0 |
| East Providence | 121 | 23 | <5 | | <5 |
| Exeter | 14 | <5 | 0 | | 0 |
| Foster | <5 | 0 | 0 | | 0 |
| Glocester | 7 | 0 | 0 | | 0 |
| Hopkinton | 5 | 0 | 0 | | 0 |
| Jamestown | <5 | 0 | 0 | | 0 |
| Johnston | 39 | 6 | <5 | | 0 |
| Lincoln | 27 | <5 | 0 | | 0 |

Table 13. (cont.) Demographic characteristics of reported chlamydia, gonorrhea and syphilis cases, Rhode Island 2007

| Disease | Chlamydia | Gonorrhea | Syphilis (Primary, Secondary) | Syphilis (Early latent) | Syphilis (All Late Stages) |
|-------------------|-----------|-----------|-------------------------------------|-------------------------------|----------------------------------|
| Residence | | | | | |
| City/Town (cont.) | | | | | |
| Little Compton | <5 | 0 | 0 | | 0 |
| Middletown | 23 | <5 | 0 | | 0 |
| Narragansett | 29 | <5 | 0 | | 0 |
| New Shoreham | <5 | 0 | 0 | | 0 |
| Newport | 74 | 6 | <5 | | <5 |
| North Kingstown | 19 | <5 | 0 | | 0 |
| North Providence | 91 | 7 | <5 | | <5 |
| North Smithfield | 10 | <5 | <5 | | 0 |
| Pawtucket | 348 | 54 | <5 | | <5 |
| Portsmouth | 13 | 0 | 0 | | 0 |
| Providence | 1,253 | 179 | 21 | | 15 |
| Richmond | 5 | 0 | 0 | | 0 |
| Scituate | 22 | 0 | 0 | | 0 |
| Smithfield | 27 | <5 | 0 | | 0 |
| South Kingstown | 79 | <5 | <5 | | 0 |
| Tiverton | 7 | <5 | 0 | | <5 |
| Warren | 20 | <5 | 0 | | 0 |
| Warwick | 119 | 10 | <5 | | 0 |
| West Greenwich | 11 | 0 | 0 | | 0 |
| West Warwick | 65 | <5 | 0 | | 0 |
| Westerly | 19 | 0 | <5 | | 0 |
| Woonsocket | 184 | 25 | <5 | | 0 |
| Unknown | 15 | <5 | 0 | | 0 |

INFECTIOUS SYPHILIS

Rhode Island, like many other parts of the country, has seen an increase in reported cases of infectious syphilis. In 2006, Rhode Island's rate of primary and secondary syphilis ranked thirty-fourth in the nation at 1.3 cases/100,000 population. This was after three straight years of Rhode Island being ranked in the top twenty states with the highest burden of disease. In 2007, the Rhode Island rate of primary and secondary syphilis increased again to 3.4 cases/100,000 people.

There were 46 cases of infectious syphilis (primary, secondary and early latent stages) statewide in 2007, an increase of 130% over the 20 reported cases in 2006 and an 820% increase

in infectious syphilis from the five reported cases in 2000. *Forty-three of the cases were male, of whom thirty-seven (85%) were men who have sex with men. Of the*

latter, nineteen were self reported to be HIV positive. Unlike gonorrhea and chlamydia, where infection is concentrated mostly among the 15-24 year old population, the cases of infectious syphilis reported in Rhode Island were older with an average age of 38 years. We are in the midst of a syphilis outbreak among MSM in RI.

Table 14: Demographic characteristics of Infectious Syphilis Cases Rhode Island **2001 –2007**

| | 2001 | | 2002 | | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|--|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| | # | Rate* | # | Rate* | # | Rate* | # | Rate* | # | Rate* | # | Rate* | # | Rate* |
| Statewide | 12 | 1.1 | 22 | 2.1 | 40 | 3.7 | 41 | 3.8 | 29 | 2.7 | 20 | 1.9 | 46 | 4.3 |
| Core Cities (Providence, Pawtucket, Central Falls) | 9 | 3.4 | 16 | 5.9 | 21 | 7.8 | 30 | 11.1 | 16 | 5.9 | 14 | 5.2 | 26 | 9.7 |
| Average Age | 39 | -- | 34 | -- | 37 | -- | 35 | -- | 37 | -- | 38 | -- | 38 | -- |
| Hispanic | 0 | 0 | 8 | 7.8 | 3 | 2.8 | 13 | 11.6 | 8 | 7.0 | 1 | 0.8 | 5 | 4.2 |
| Black | 2 | 4.1 | 2 | 4.0 | 7 | 13.7 | 4 | 7.6 | 7 | 13.3 | 3 | 5.6 | 5 | 9.4 |
| White | 10 | 1.1 | 12 | 1.4 | 27 | 3.1 | 24 | 2.8 | 14 | 1.6 | 15 | 1.8 | 32 | 3.8 |

| | 2001 | | 2002 | | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|---|-----------|--------------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|-------------|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Males | 11 | 91.7 | 17 | 25 | 29 | 72.5 | 25 | 61.0 | 22 | 75.0 | 20 | 100 | 43 | 93.5 |
| Males who were MSM's | 3 | 27.3 | 12 | 16 | 19 | 65.5 | 16 | 64.0 | 14 | 63.6 | 17 | 85.0 | 37 | 86.0 |
| MSM's who are self-reported HIV+ | 2 | 66.7 | 6 | 3 | 12 | 63.2 | 3 | 18.8 | 2 | 15.4 | 8 | 47.1 | 19 | 51.4 |
| Females | 1 | 8.3 % | 5 | 16 | 11 | 27.5 | 16 | 39.0 | 7 | 25.0 | 0 | 0 | 3 | 6.5 |
| Women who had sex in exchange for money/drugs | -- | -- | 0 | 5 | 6 | 54.5 | 5 | 31.3 | 2 | 28.6 | 0 | 0 | 0 | 0 |

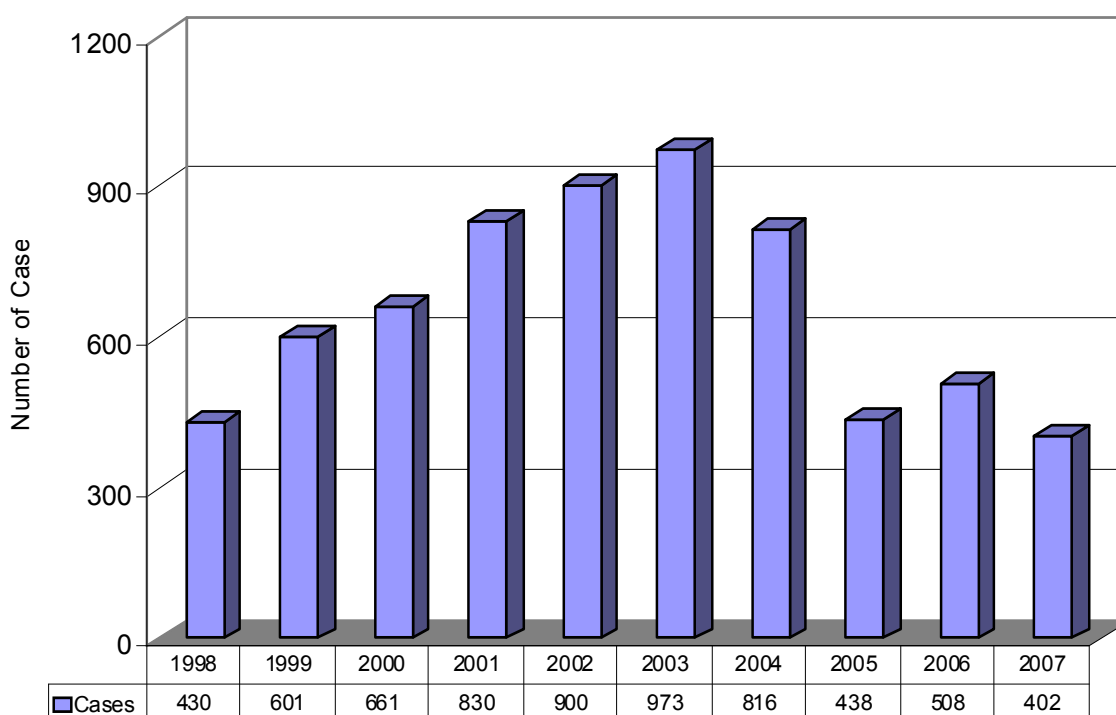
* Rates are expressed as cases/100,000 population. Rates are based on the 2001 to 2006 Rhode Island population estimates as calculated by the U.S. Bureau of the Census. The rate for 2007 is based on 2006 Rhode Island population estimates.

GONORRHEA

There were 402 cases of gonorrhea reported in 2007. This represents a 21% decrease from the 508 cases reported in 2006. There has in fact been a steady decrease in the reported cases of gonorrhea since 2003, when a peak of 973 cases was reported. The increased use of sensitive nucleic acid amplification tests beginning in the late 1990's, along with increases in STD screening for females has lead to increased gonorrhea case finding, especially among the asymptomatic. This initially was reflected in a period when the number of reported gonorrhea cases in Rhode Island began to increase and reached a peak in 2003.

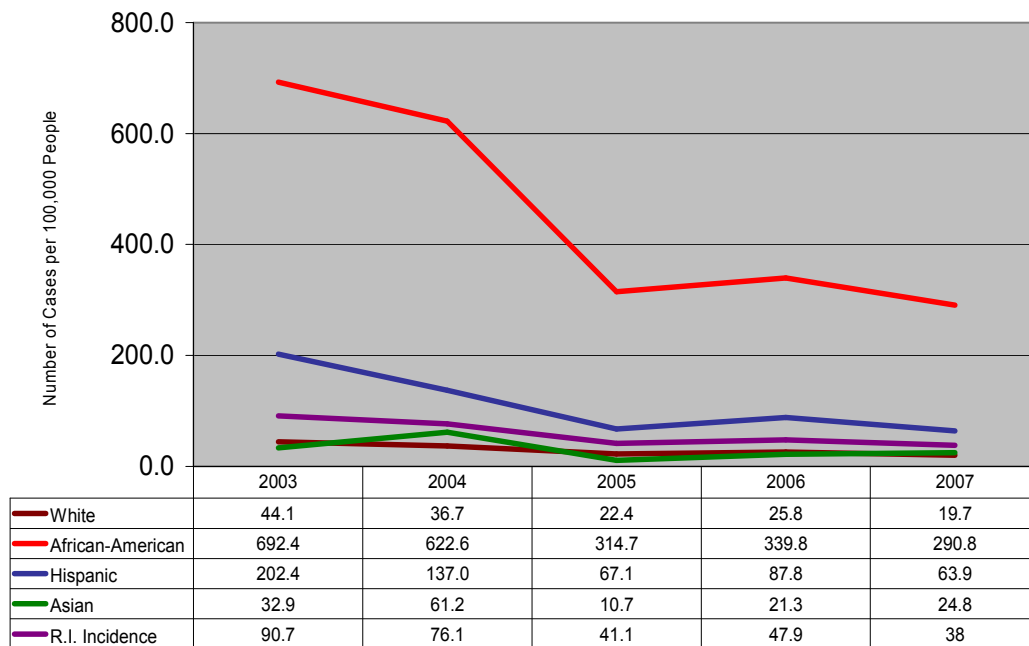
Over time, the pool of asymptomatic gonorrhea carriers has diminished due to the screening activities of the prior years, and in turn has led to lower rates of gonorrhea in both genders. Additionally, there has been aggressive case management of males by STD Program field staff in core transmission zones as well, during this period contributing to effective control. The number of cases reported in 2007 represents the smallest number of gonorrhea cases reported in a year since 1962.

Figure 30: Reported Cases of Gonorrhea,
Rhode Island, 1998-2007



During the past five years, African Americans in Rhode Island have consistently had the highest incidence rates of gonorrhea followed by Hispanics and Whites, though the gap between the African American incidence rate and the other race/ethnicities has decreased over the past few years. Figure 31 describes this trend.

Figure 31: Gonorrhea Rates, Rhode Island, 2003-2007*

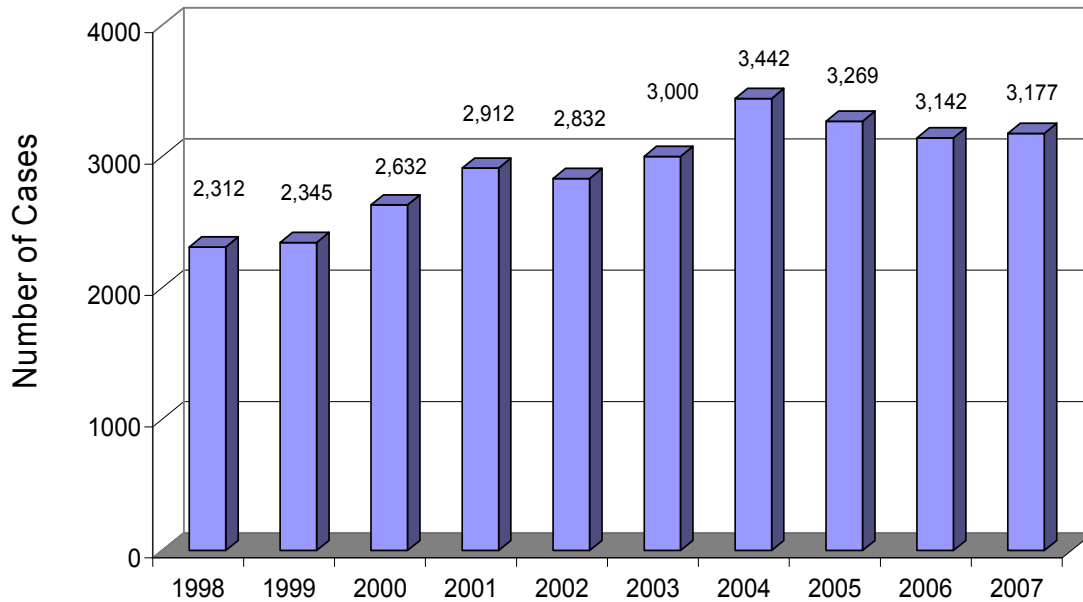


* Rates are expressed as cases/100,000 people. Rates are based on the 2003-2007 RI population as estimated by the U.S. Bureau of the Census. The rates for 2003, 2004, 2006 and 2007 are estimates due to some missing race/ethnicity data.

CHLAMYDIA

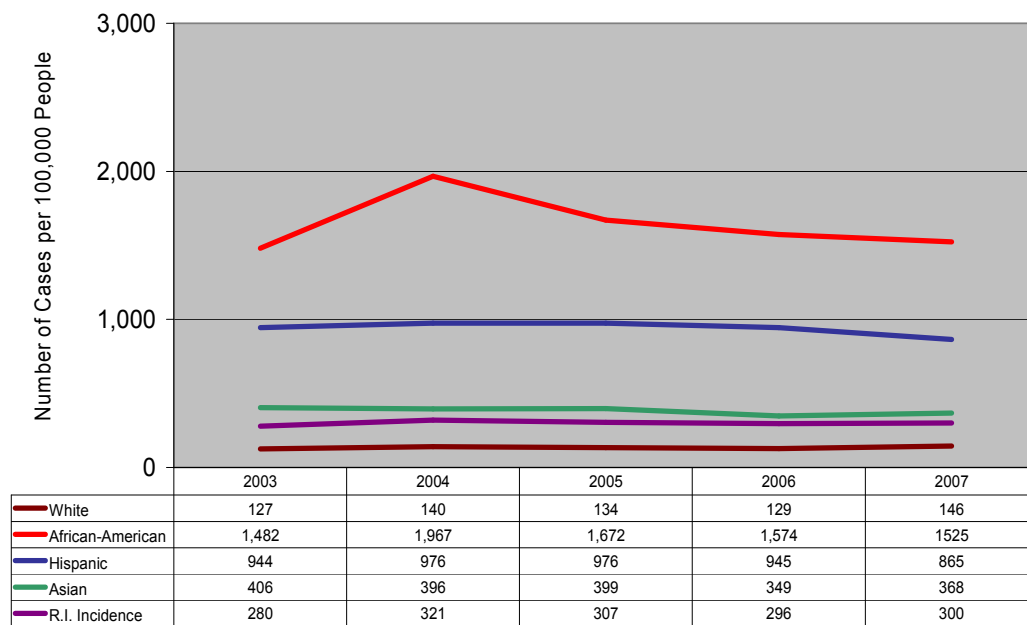
There were 3,177 cases of chlamydia reported to HEALTH in 2007. This represents a 2% increase from the 3,142 cases reported in 2006. Like in past years in Rhode Island, females accounted for approximately three-quarters of the chlamydia cases. The discrepancy between males and females is due to the routine practice of screening for chlamydia in females rather than the lack of infections in males. Treating partners (and hence preventing re-infection of females) remains a challenge.

**Figure 32: Reported Cases of Chlamydia,
Rhode Island, 1998-2007**



The rates of chlamydia infection are higher among African American people than Hispanics and White, which is similar to the HIV infection and the gonorrhea distribution among the people of different race and ethnicity. This can be explained by the fact that the transmission of HIV and most of the sexually transmitted diseases involves engagement in similar high risk sexual activities. Unlike gonorrhea, where the discrepancy between African American gonorrhea rates and the other race/ethnicity gonorrhea rates has decreased, the discrepancy between African American chlamydia rates and the other race/ethnicity chlamydia rates has for the most part remained consistent.

Figure 33: Chlamydia Rates, Rhode Island, 2003-2007



Rates are expressed as cases/100,000 people. Rates are based on the 2003-2007 RI population as estimated by the U.S. Bureau of the Census. The rates for 2003 - 2007 are estimates due to missing race/ethnicity data.

CTS (Counseling Testing and Referral Sites) in Rhode Island

Publicly funded counseling and testing services provided by the Department of Health in collaboration with the CDC (Centers for Disease Control and Prevention) were initiated in 1985 to provide alternatives to blood donation as a means for high –risk persons to determine their HIV status. These services became an integral part of HIV prevention programs and the HIV Counseling and Testing System (CTS) was developed to monitor client’s use of program services. CTS provide anonymous (no identifying information recorded) and confidential (identifying information recorded) voluntary HIV counseling, testing, and referral services.

In 2007 there were a total of 3,259 HIV tests performed at publicly funded CTS in Rhode Island. Of these 3,259 tests 32 were positive, 1,155 tests were anonymous (no names are taken at the time of the test and a code is used for purposes of record keeping), 2,094 tests were confidential (names are exchanged and the patient is known to the testing site) and 10 were unspecified (records were not ascertainable on this group). 2,220 (68%) of the individuals tested at CTS were males, 1,033 (32%) were females and 6 (<1%) were of undetermined gender. About 49% of those utilizing CTS services in 2007 were White, 18% were African American, 27% were Hispanic, 3% were Asian or Pacific Islander, 1% were native Americans, and <1% were of undetermined race. The majority of CTS clients were in the 20 to 29 years old age group (44%). Figure 32 illustrates the Distribution of clients by risk factors. We find in order of magnitude that heterosexuals were the largest group to utilize CTS services, followed by MSM and those with sex partner at risk and with a STD diagnosis.

Figure 34. Distribution of 2007 CTS Clients by Risk Factor

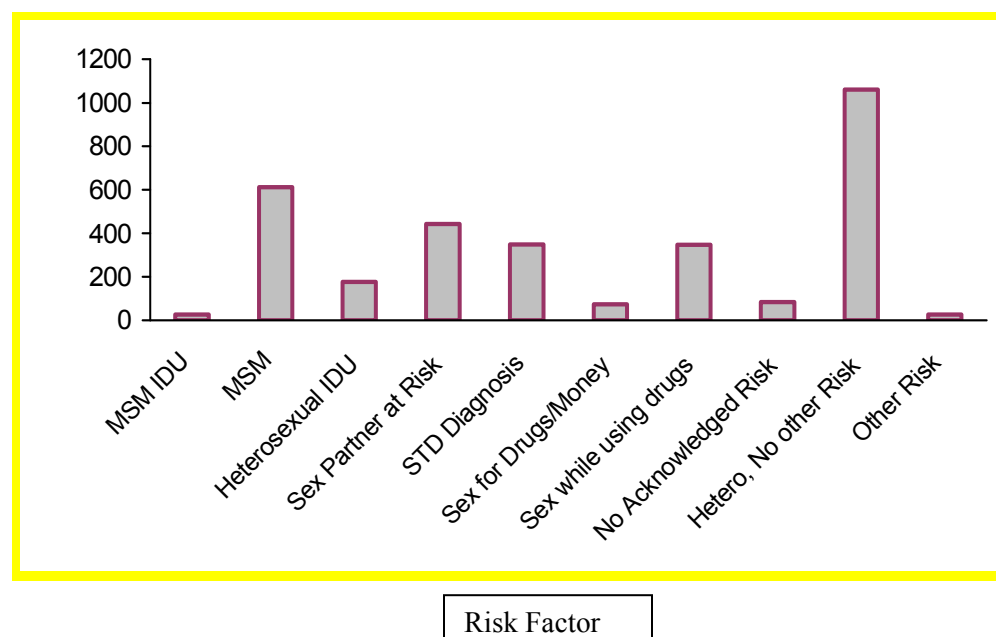


Figure 35: 2007 CTS Clients by race and ethnicity

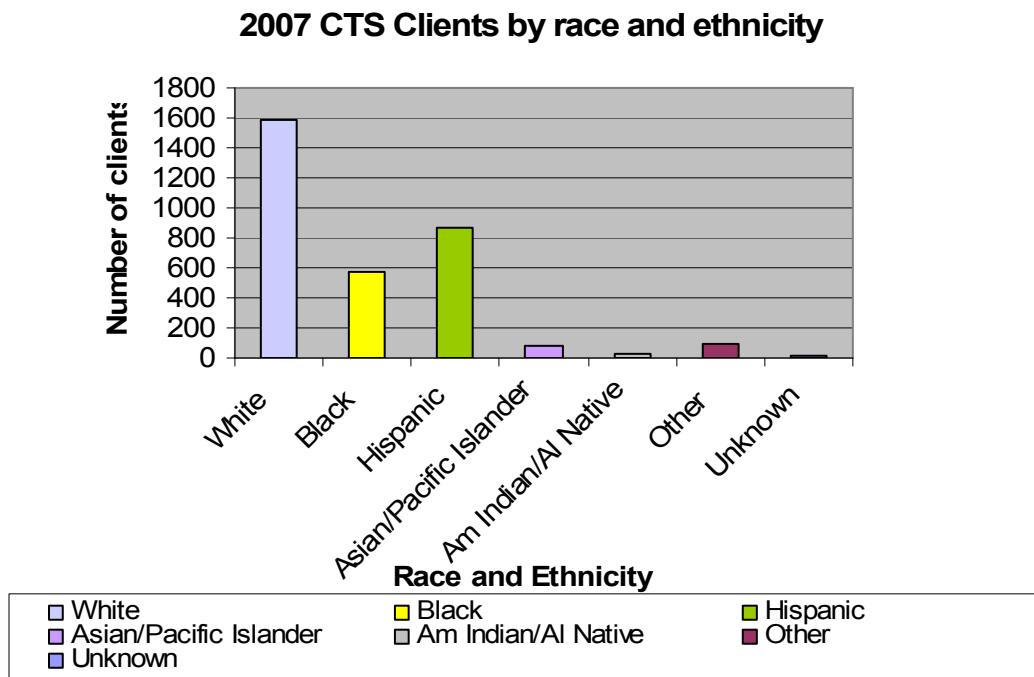
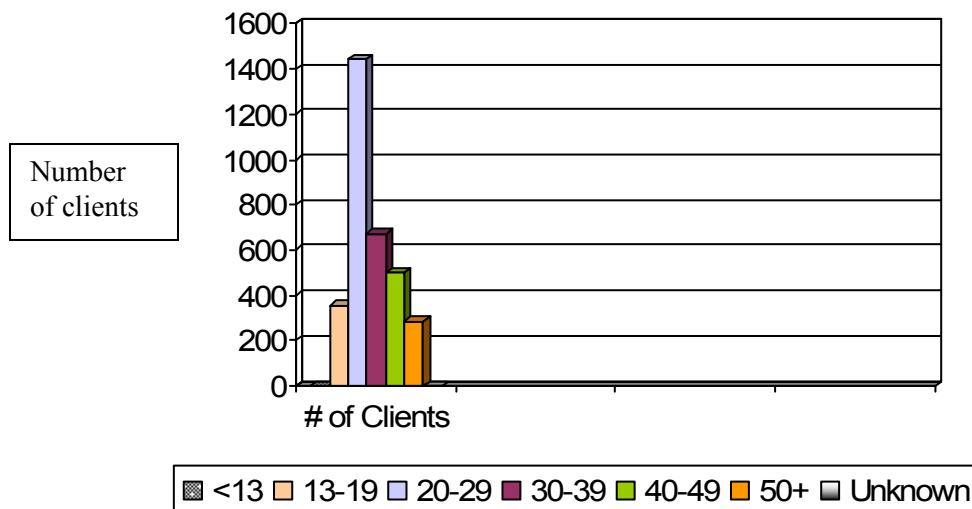


Figure 36: Age distribution of 2007 Clients



ENCORE: Rhode Island's Needle Exchange Program

ENCORE (Education, Needle Exchange, Counseling, Outreach and Referral) is an anonymous and confidential harm reduction program, coordinated by the Office of HIV/AIDS & Viral Hepatitis in Rhode Island since April 1995. The purpose of the needle exchange program is to prevent HIV transmission by giving injection drug users the tools (such as new syringes, bleach, clean cotton, alcohol swabs, condoms, information on skin care, and counseling and/or referrals) to protect themselves from acquiring blood-borne pathogens from contaminated needles and other drug paraphernalia. The information provided in the mandatory enrollment interview is helpful in identifying the risk behaviors of current IDUs in Rhode Island.

The following figures present number and demographic characteristics of the ENCORE enrollees.

Figure 37. New ENCORE Enrollments by Year

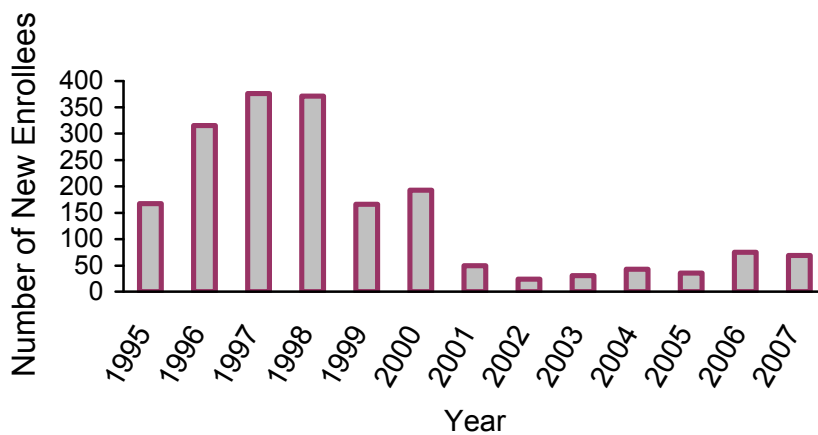


Figure 38. Gender Distribution of New ENCORE Enrollees 1995-2007

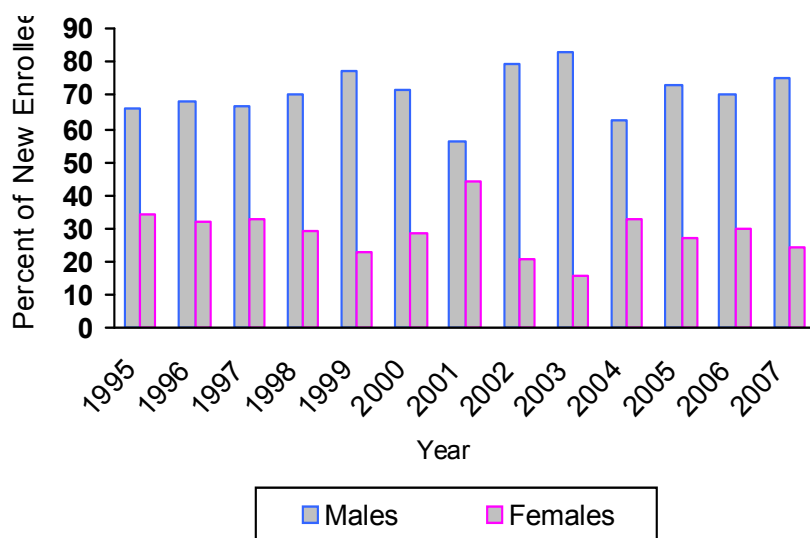


Figure 39. New ENCORE Enrollees by Race/Ethnicity 2007

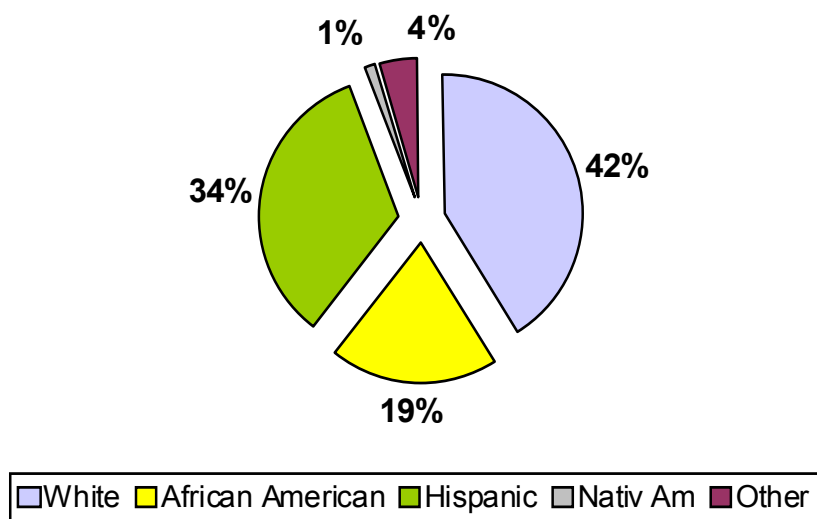
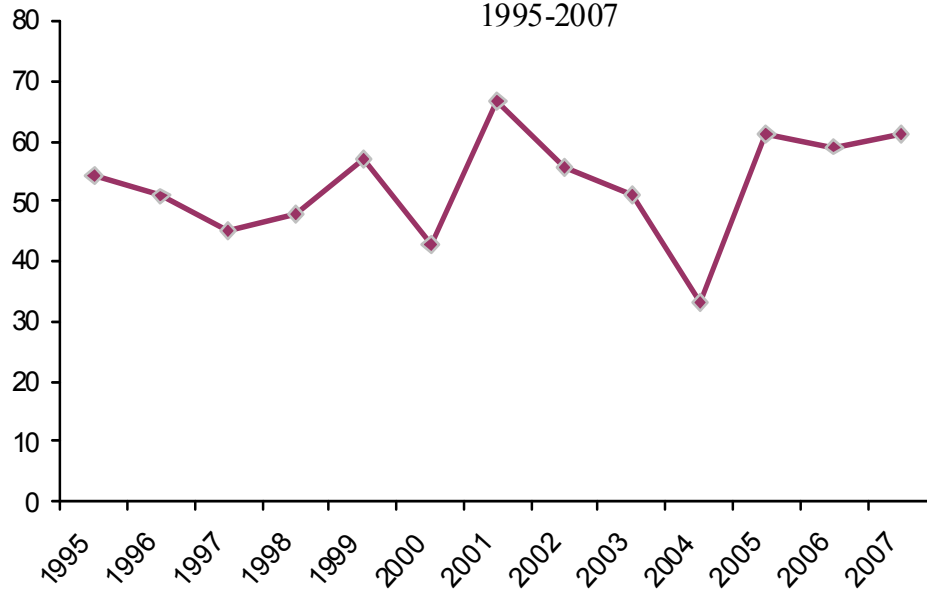


Figure 40. Percent of New Enrollees Who Have NOT Shared
Syringes with Others in the Past 30 Days
1995-2007



Tuberculosis (TB) in Rhode Island

Tuberculosis (TB) is a disease that is spread from person-to-person through the air, and it is particularly dangerous for people infected with HIV. Worldwide, TB is the leading cause of death among people infected with HIV.

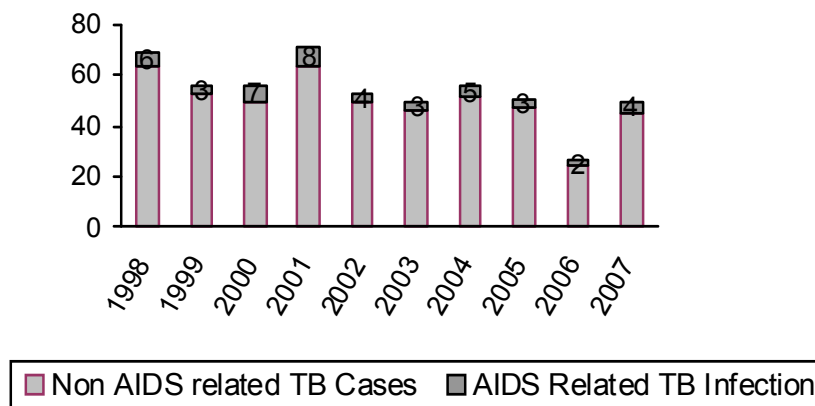
- Approximately 2 billion people (one-third of the world's population) are infected with *Mycobacterium tuberculosis*, the cause of TB.
- TB is the cause of death for one out of every three people with AIDS worldwide.
- The spread of the HIV epidemic has significantly impacted the TB epidemic - one-third of the increase in TB cases over the last five years can be attributed to the HIV epidemic (Source: UNAIDS).

An estimated 10-15 million Americans are infected with TB bacteria, with the potential to develop active TB disease in the future. About 10 percent of these infected individuals will develop TB at some point in their lives. However, the risk of developing TB disease is much greater for those infected with HIV and living with AIDS. **Because HIV infection so severely weakens the immune system, people dually infected with HIV and latent TB have a 100% lifetime probability of developing active TB disease and becoming infectious compared to people not infected with HIV. CDC estimates that 10 to 15 percent of all TB cases and nearly 30 percent of cases among people ages 25 to 44 are occurring in HIV-infected individuals.**

This high level of risk underscores the critical need for targeted TB screening and preventive treatment programs for HIV-infected people and those at greatest risk for HIV infection. All people infected with HIV should be tested for TB, and, if infected, complete preventive therapy as soon as possible to prevent TB disease. (Source: <http://www.cdc.gov/hiv/pubs/facts/hivtb.htm>)

Rhode Island follows the national AIDS/TB co-infection trends. On average, 9% of all TB infections diagnosed in the past five years were AIDS related. Figure 33, illustrates these findings.

Figure 41. AIDS/Non AIDS related TB Infections, 1998-2007



Viral Hepatitis C in Rhode Island

The national prevalence rate of hepatitis C was estimated at 1.6% in 2005. However, actual national prevalence is likely to be considerably higher due to variances associated with surveillance of the disease such as low levels of public knowledge and understanding of HCV, and lack of surveillance and programmatic funding for testing and referral resources for the high risk, increase the likelihood that current prevalence rates are highly underestimated. ***Based on this estimate RI is likely to have as many as 17,000 prevalent cases of hepatitis C.*** This is a huge burden of disease, in recognition of which RI in 1998 launched a provider and public education campaign and started systematic surveillance to the extent feasible by limited resources.

Data obtained from laboratory reporting is subject to limitations. On some reports information is missing from certain fields. Also, this reporting system depends upon the cooperation and willingness of the laboratories to report, and it is therefore possible that underreporting occurs. Blood work ordered to labs from drug treatment facilities are without names and have codes instead, and often are lost to the system because of inadequate follow up for transcription. Duplicates are removed from the yearly positive report totals. A limited number of duplications may not be detectable if patients concerned about the sensitivity of the information use aliases. The data received also provides strongly limited information regarding race and ethnicity due to the high percentage of "unknown" entries in this field.

From a clinical perspective, approximately 15% of individuals tested HCV positive will spontaneously resolve, and in the absence of serial viral load testing, and in the absence of an easy to perform antigen marker test, cannot be recognized as resolved cases, and remain in the registry. Another shortcoming is that until a second confirmatory test (such as RIBA or PCR) received for some cases, most of them remain in the system in suspect status; and may also represent false positives.

To address these issues and also to move onto the nationwide system used for reporting of communicable diseases to the CDC, Rhode Island Hepatitis surveillance program started using the NEDSS (National Electronic Disease Surveillance System) Based System late 2006. This is a case based surveillance system, which reduces the issue of duplicity significantly and also allows proper follow-up of cases to determine their status (suspect/confirmed).

Laboratory reports from the years 1992-2006 (September) give an indication of trends over this time period. The number of positive reports increased significantly from 182 reports in 1992 to 1,962 reports in 2006 (9 months). Increased provider and public knowledge regarding HCV can account for a significant percentage of this increase; however, this percentage cannot be determined. The increase may be due to the tendency of positive cases to be identified years after the exposure, and disease trends have suggested that the greatest number of new cases were contracted 10-30 years ago. The following charts show a basic overview of the number of positive lab reports in Rhode Island from 1992 to 2006 (Jan-Sep) and also the number of new cases by sex and age-group (Oct.-Dec).

Figure 42. Hepatitis C Lab Reports in RI
by Year 1992-2006(September)

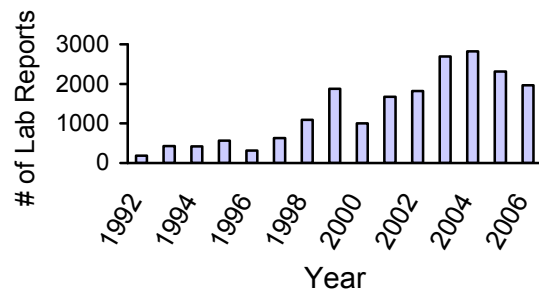


Figure 43. The Age Distribution of Individuals
with Positive Hepatitis C Test Results 1992-
2002

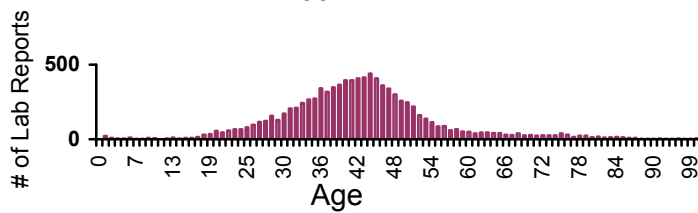


Figure 44. Gender Distribution of Positive HCV
Lab Reports (1992-2006 September)

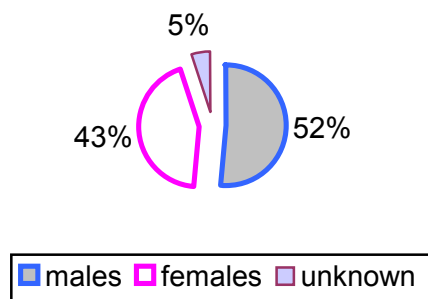
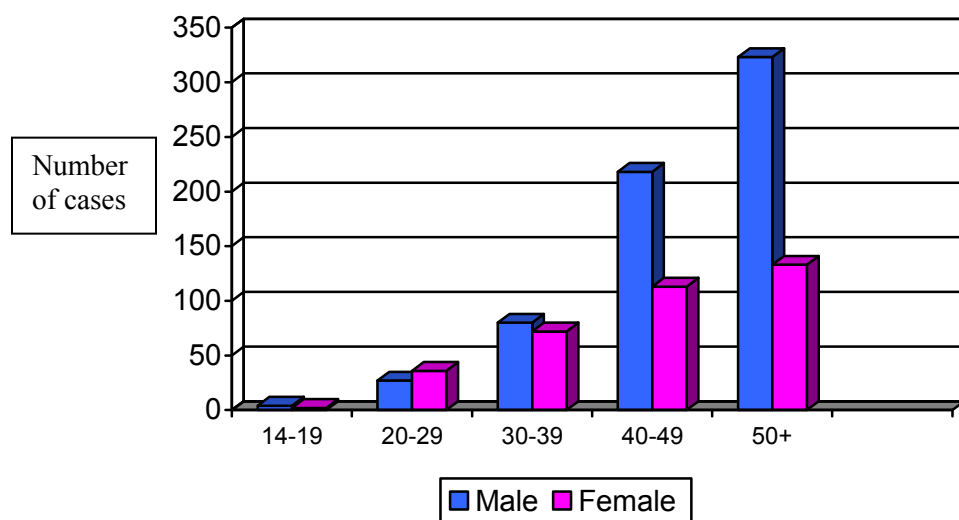


Figure 45: Confirmed Chronic Hepatitis C cases by sex and age, 2008



About one quarter of HIV-infected persons in the United States are also infected with hepatitis C virus (HCV). HCV is one of the most important causes of chronic liver disease in the United States and HCV infection progresses more rapidly to liver damage in HIV-infected persons. HCV infection may also impact the course and management of HIV infection. (Source: http://www.cdc.gov/hiv/pubs/facts/HIV-HCV_Coinfection.htm)

The Rhode Island Department of Health has responded over the course of the past few years to the high prevalence of hepatitis C, by systematic inclusion of hepatitis C prevention and control strategies in all HIV/AIDS related programming. Rhode Island's ENCORE program consists of education, needle exchange, counseling, outreach, and referrals. Because IDU is currently the most significant mode of HCV transmission, the ENCORE program captures a portion of the highest risk population. ENCORE was designed for and has traditionally focused on HIV and AIDS. However, HIV and HCV are transmitted comparably through IDU, and integration of HCV prevention and referrals (for testing and treatment services with providers who have agreed to participate) into the ENCORE program is therefore logical and efficient.

Vendors providing HIV counseling and testing receive thorough HIV education and certification. Hepatitis C information has been integrated into the education, which is conducted by a public health nurse. The goal is to encourage these vendors to educate their clients about hepatitis C by integrating HCV into HIV prevention materials, trainings, and staff development. The vendors subsequently make referrals to HCV testing services as appropriate. Public education materials and HCV screening and treatment guidelines have been distributed to providers.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an on-going data collection program, administered and supported by the CDC's National Center for Chronic Disease Prevention and Health Promotion. Surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. The information attained from the BRFSS is useful in describing the populations at risk for contracting HIV through their behaviors.

According to the 2000 BRFSS in Rhode Island, 31.5% of those surveyed indicated that they were at risk (high, medium, or low) of getting infected with HIV (compared to 68.5% who responded there was no chance they could be infected with HIV). The BRFSS also revealed that 52.6% of those surveyed had been tested for HIV at some point in their lives, aside from routine screening when donating blood. 37% of those surveyed had been tested for HIV in the 12-month period prior to the survey, aside from routine screening when donating blood.

Youth Risk Behavior Survey (YRBS)

The Youth Risk Behavior Survey (YRBS) is an anonymous and voluntary survey conducted on alternate years among randomly selected middle and high schools students nationwide. The YRBS is developed by the Division of Adolescent and School Health at the Centers for Disease Control and Prevention (CDC). The CDC sponsored YRBS in 44 states and 23 cities nationwide in 2005. Total number of sites participating in 2005 survey was 71. The YRBS monitors six categories of priority health risk behaviors that contribute to the major causes of mortality, disease, injury, and other health and social problems among youth in the United States. Summary findings of the 2005 survey on national and Rhode Island level are described below.

Nationwide in 2005, 46.8% of surveyed students had had sexual intercourse during their life; prevalence of which was higher among Black and Hispanic male than Black and Hispanic women students. Overall 87.9% of students were taught about HIV/AIDS in school. 11.9% of students nationwide had been tested for HIV, and prevalence of HIV testing was higher among female (13.2%) than male (10.6%). In 2005, 14.3% of high school students had had sexual intercourse with four or more persons during their life nationwide. In general, the prevalence of having had sexual intercourse with four or more persons was higher among male than female students, higher among Black than white and Hispanic students, and higher among Hispanic than white students. About 33.9% of the students nationwide were currently sexually active and among those, 62.8% reported that either they or their partner had used a condom during last sexual intercourse; prevalence of having condom used was higher among male than female.

In 2005 46.7% of Rhode Island high school students had sexual intercourse, an increase from 44% in 2003. 87.4% of high school students were taught about AIDS or HIV infection in school, a decrease from 91% in 2003. 13% of the students reported having sexual intercourse with four or more people during their life. Overall 36.5% of the students were currently sexually active and of them 34% did not use a condom in their previous sexual intercourse, a significant decrease from 47% reported in 2003; prevalence of having condom used was higher among male than female. 22% of the students were taught about AIDS/HIV in school and drank alcohol or used drug before last sexual intercourse, and the prevalence was higher in male than female.

In 2005 42.7% of Rhode Island high school students had a drink of alcohol in the past thirty days compared to 45% in 2003. 42.6% students reported ever using marijuana in 2005, a decrease from 44% in 2003. About 3% of the students reported ever having illegal injection drug.

List of Figures and Tables

Figures:

- Figure 1. Age Distribution of People in Rhode Island in 2001.
- Figure 2. Types of Households in Rhode Island 2001.
- Figure 3. The Educational Attainment of People in Rhode Island in 2001.
- Figure 4. Rhode Island AIDS Incidence, Prevalence, and Deaths, 1990-2007.
- Figure 5. Rhode Island AIDS Incidence by Gender, 1993-2007.
- Figure 6. Rhode Island AIDS Incidence by Age, 1993-2007.
- Figure 7a. Percentages of Cumulative AIDS Cases by Race in Rhode Island 1993-2007
- Figure 7b. Percentages of Rhode Island Population by Race, 2000 Census.
- Figure 8. Percentages of Rhode Island Cumulative AIDS cases by Country of Origin, 1982-2007
- Figure 9. Rhode Island AIDS Incidence by Exposure Category, 1993-2007.
- Figure 10. AIDS Deaths, RI Residents, 1990-2007.
- Figure 11. Rhode Island HIV Incidence 2000-2007.
- Figure 12. Rhode Island HIV Incidence by Gender 2000-2007.
- Figure 13. Rhode Island HIV Cases per 100,000 Populations, 2000-2007.
- Figure 14. HIV (not AIDS) Incidence Among Men by Exposure Category 2000-2007.
- Figure 15. HIV Infected MSM by Race, 2000-2007.
- Figure 16. HIV Rates among MSM by Race, 2000-2007.
- Figure 17. HIV Infected MSM by Age and Year of Diagnosis, 2000-2007.
- Figure 18. Percentage of HIV Cases with IDU as their Identified Mode of Transmission: 1989-2007.
- Figure 19. HIV Infected Hispanic Men by Mode of Exposure, 2000-2007.
- Figure 20. HIV Infected Hispanic Women by Mode of Exposure, 2000-2007.
- Figure 21. HIV Infected African American Men by Mode of Exposure, 2000-2007.
- Figure 22. HIV Infected African American Women by Mode of Exposure, 2000-2007.
- Figure 23. HIV Infected White Men by Mode of Exposure, 2000-2007.
- Figure 24. HIV Infected White Women by Mode of Exposure, 2000-2007.
- Figure 25. HIV Rates Among Women by Race/Ethnicity, Rhode Island, January 1, 2000-December 31, 2007.
- Figure 26. HIV Cases among Women by Exposure Category, Rhode Island, January 1, 2000-December 31, 2007.
- Figure 27. HIV Incidence among Youth (13-24 years old), January 1, 2000 to December 31, 2007.
- Figure 28. HIV Cases Among Male Youth by Exposure Category, Rhode Island, 2000-2007.
- Figure 29. HIV Cases Among Female Youth by Exposure Category, Rhode Island, 2000-2007.
- Figure 30. Reported Cases of Gonorrhea, Rhode Island, 1998-2007.
- Figure 31: Gonorrhea rates by Race and Ethnicity, Rhode Island 2003-2007.
- Figure 32. Reported Cases of Chlamydia, Rhode Island, 1998-2007.
- Figure 33. Chlamydia rates by Race and Ethnicity, Rhode Island 2003-2007.
- Figure 34. Distributions of 2007 CTS Clients by Risk Factor.
- Figure 35. 2007 CTS Clients by race and ethnicity.

Figure 36. Age distribution of 2007 CTS Clients.
 Figure 37. New Encore Enrollments by year 1995-2007.
 Figure 38. Gender Distribution of New ENCORE Enrollees 1995-2007.
 Figure 39. New ENCORE Enrollees by Race/Ethnicity 1995-2007.
 Figure 40. Percentage of Enrollees Who Have NOT Shared Syringes with Others in the Past 30 Days, 1995-2007.
 Figure 41. AIDS/Non AIDS Related TB Cases 1998-2007.
 Figure 42. Hepatitis C Lab Reports in Rhode Island, 1992-2006 (Sep)
 Figure 43. Age Distribution of Individuals with Positive Hepatitis C Test Results.
 Figure 44. Gender Distribution of HCV Positive Lab Reports, 1992-2006 (Sep).
 Figure 45. Confirmed Chronic Hepatitis C cases by sex and age, 2008

Tables:

Table 1. Demographic Characteristics of RI AIDS Cases 1982-2007.
 Table 2. Demographic Characteristics of RI AIDS Cases by Year of Diagnosis 1998-2002.
 Table 3. Demographic Characteristics of RI AIDS Cases by Year of Diagnosis 2003-2007.
 Table 4. Percentage of children ages 0-12 reported with AIDS, RI residents, 1982-2007, by demographic characteristics.
 Table 5. Demographic Characteristics of HIV Cases, January 1, 2002 to December 31, 2007.
 Table 6. Demographic Characteristics of RI HIV cases 2000-2007.
 Table 7. Demographic Characteristics of Male HIV Cases, January 1, 2002 to December 31, 2007.
 Table 8. Demographic Characteristics of Female HIV Cases, January 1, 2002 to December 31, 2007.
 Table 9. Demographic Characteristics of HIV Infected Male IDU cases: 2000-2007
 Table 10. Demographic Characteristics of HIV Infected Female IDU cases: 2000-2007
 Table 11. Percentage of newly diagnosed cases of HIV, RI prison inmates, January 1, 2000-December 31, 2007, by demographic characteristics
 Table 12. Comparison of the Demographic Characteristics of Individuals Diagnosed with HIV Only and Individuals Who Become Aware of Their Positive HIV Status When Diagnosed with AIDS, January 1, 2000 to December 31, 2007.
 Table 13. Demographic characteristics of reported Chlamydia, gonorrhea and syphilis cases, Rhode Island 2007.
 Table 14. Infectious Syphilis Cases, Rhode Island, 2001 – 2007.